



The Chat

BULLETIN OF THE NORTH CAROLINA BIRD CLUB
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JOHN H. GREY, JR., EDITOR
1719 PARK DRIVE

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FOREWORD

This first issue of THE CHAT goes to two hundred people in North Carolina, and outside the state, who have shown an interest in our birds. Following issues will go only to members, and to certain libraries for permanent record.

THE CHAT will publish two types of information about birds. The first type will be information which is of scientific value helping us know more accurately the life history of particular species. This data will deal with the scarcity or abundance of this species throughout the state, migration dates, nesting data, sub-species and the like. Much of this information must be gathered regularly by someone in each community: therefore we welcome all field notes and will publish such notes by localities. The value of such notes will depend upon their accuracy.

The other type of information will be of a popular nature. All of our people are not interested in doing work of the first type, and some have not yet learned enough about our birds to gather much data. All of us are interested in the aesthetic values of birds and in the sheer pleasure which they bring to us. Therefore we hope to publish articles which will stimulate our interest in our birds, help us know more species, and perhaps lead us into that keener interest which will spur us to gather information of scientific value as well as aesthetic. You will recognize that an article may contain both types of information, for the two types are not mutually exclusive.

The April Number.

The next issue of THE CHAT will appear about the middle of April. The feature article will be by C. S. Brimley, President, on the "Additions to the North Carolina Avifauna." The article will deal with the thirtyfour additions to our check-list since the appearance of THE BIRDS OF NORTH CAROLINA in 1919. Brimley is revising this book in preparation for a second edition.

Included also will be all field and banding notes received by April 5th. These will emphasize March observations, but will include any made before then and not yet published.

Single copies of any number may be secured from the Editor for twentyfive cents.

Organization Meeting of North Carolina Bird Club

Seventyfive people came from all over the State to form a state-wide society of ornithology. The meeting was called by the Raleigh Bird Club and was opened by Mrs. Charlotte Hilton Green, President of the Club. Those present were asked to introduce themselves, stating their community and the following were represented: Alleville, Statesville, Winston-Salem, Greensboro, Southern Pines, Pine Bluff, Sanford, Oxford, Cary, Rocky Mount, Wilson, Greenville, Washington, Tarboro, Raleigh, Syracuse, N.Y., Belfast, N.Y., and Lexington, Virginia.

The purpose of the meeting was stated and Mrs. Green asked the Rev. Dr. J. J. Murray of Virginia to tell of the work of the Virginia Society of Ornithology and other groups. Murray has been Editor of THE RAVEN, bulletin of the V.S.O. for seven years, is the Secretary of the National Association of Audubon Societies and was last year elected to full membership in the American Ornithologists' Union- of which there are less than 150 full members. He stated that their society began seven years ago with eighteen members which were increased to forty charter members. Meetings are held annually in various cities to increase interest. The Society has gathered data for a state book on Virginia birds, stimulated interest in the value and protection of birds and has probably saved the State ten thousand dollars a year in preventing the return of the bounty on hawks and owls. He said that any state could maintain such a club if twelve people were vitally interested in the work and fifty more were increasing their interest.

The group voted to organize a state club. A constitution for such a club was presented, revised and adopted. The name to be "The North Carolina Bird Club", with dues of one dollar a year. Anyone interested in birds to be eligible for membership, meetings to be held annually, the bulletin to be THE CHAT and the Executive Committee to consist of the following five officers: President, three Vice-Presidents and a Secretary-Treasurer who would also edit the bulletin. Mrs. Green appointed as a Nominating Committee: Harry T. Davis and C. H. Bostian of Raleigh, Miss Nancy Eliason of Statesville, A. D. Shaftsbury of Greensboro and J. J. Sigwald of Wilson.

Luncheon was served in the Woman's Club, in which the meeting was being held, with sixty-five present. John F. Grey, Jr., presented Dr. Murray who again spoke to the group. His subject was "Wild Wings", in which he spoke of ornithology as an art, a science and a sport.

Dr. Z. P. Metcalf presided over the afternoon session. He presented the report of a special committee appointed to recommend the amount to be charged for annual dues. Their report of one dollar was adopted. Mr. Davis presented the report of the Nominating Committee. Their report was adopted and the following elected as officers:

OFFICERS OF N. C. B. C.

C. S. Brimley, President, N. C. Department Agriculture, Raleigh.

Francis H. Craighill, Vice-President,
Church of the Good Shepherd, Rocky Mount.

Nellie F. Sanborn, Vice President,
President, Southern Pines Bird Club, Southern Pines.

Ethel F. Finster, Vice President,
Asheville Teachers' College, Asheville.

John H. Grey, Jr., Secretary-Treasurer-Editor,
West Raleigh Presbyterian Church, Raleigh.

The Club voted to elect Dr. T. Gilbert Pearson of New York, President of the International Committee for Bird Protection, a charter member of the Club. The following telegram arrived at the home of the Secretary too late to be read:

"Greetings and best wishes to North Carolina ornithologists meeting in Raleigh today. I shall eagerly follow your every movement and rejoice with you at every success."

T. Gilbert Pearson.

Abstract of Papers Read Before the Club

WHEN IS A SIGHT RECORD VALID?

C. S. Brimley.

Several cases of sight records were cited which for various and obvious reasons were erroneous. The validity of such records depends upon the knowledge of the observer, particularly his knowledge of what points to observe about the particular bird, and also his reliability as an accurate observer. Then there enters the question of the ease or difficulty with which the particular bird could be identified, and whether the identification was made while observing the bird in the field or only made after going home and looking at pictures of birds. In the latter case, the record might not have much value. Further, records of well-known and easily-identified birds can be accepted where similar records of unusual or obscurely marked birds might have to be thrown out.

ADVENTURES IN BIRD BANDING

Mrs. Charlotte Hilton Green

Bird banding in America began in 1803-04 when young Audubon placed a silver cord on the legs of a brood of phoebes. The following year, two of the brood returned. Systematic banding began in 1899, when a young Danish teacher began banding and keeping careful records of certain birds. From Europe it spread to this country.

So much accurate information was gained as to migratory routes, breeding range, winter homes, etc., that in 1920 banding was placed under the Biological Survey. Frederick C. Lincoln has been in charge of the work for several years. Since 1920, 2,181,150 birds have been banded with returns on 135,953, an average of about 16%. This work has been done in some 2,000 stations. Only a few of these stations are located in southern states. North Carolina now has ten stations, but only five are reported as active. To band birds, one must have a permit from the Biological Survey.

One of the most interesting returns is that of a Common Tern banded in Maine in 1913 and found dead by a Negro in western Africa. Curious as to the band, he took it to a missionary who sent a report of it back to the Survey.

RECENT ADDITIONS TO THE NORTH CAROLINA CHECK LIST
Francis H. Craighill.

The Glossy Ibis (*Plegadis falcinellus*): This is perhaps the most widely distributed of all birds, being found on all five continents and in Australia. It breeds in Florida and has been recorded in several northern states and in Canada, but not heretofore from North Carolina. It has now come to light that in late August or early September, 1926, Captain Tillett of the Bodie Island Coast Guard Station saw a flock of five of these birds and shot one for identification. His companion on that occasion was Mr. Arthur Harris of the Mags Head Station, and the bird was identified as an Ibis by Mr. Frank Stick.

Lawrence's Warbler (*Vermivora lawrencei*): Blue-winged and Golden-winged Warblers often mate and the hybrid progeny is either a Brewster's Warbler which is practically a Golden-winged Warbler without the black throat and ear patch, or much less frequently a Lawrence's Warbler which is to all intents and purposes a Blue-winged Warbler with the black throat and ear patch of the Golden-winged. On June 26, 1935, a bird was reported from Rocky Mount by Craighill and Hugh H. Battle, Jr., which checked exactly with the picture and description of the Lawrence's Warbler.

Kirtland's Warbler (*Dendroica kirtlandi*): A very rare warbler. Has been found breeding only in three counties of Michigan. It winters in the Bahamas, and has been reported in migration from both Virginia and South Carolina. On September 2, 1936 Craighill saw near Rocky Mount a warbler which in appearance and action checked with the pictures and descriptions of the Kirtland's Warbler.

It is hoped that some member of our Bird Club may soon be able to supplement these sight records with collected specimens, and give these two warblers an established and legitimate place in our North Carolina Check-list.

CHARTER MEMBERS N. C. B. C.

Section 1. To date: (All those joining by May 6, 1937, may become charter members. Anyone interested in birds enough to invest \$1.00 per year and send his or her address to the Secretary by this date, will become a charter member.)

Prof. Catherine Allen, Meredith College, Raleigh
Murray Allen, Esq., 609 Security Natl. Bank Building, Raleigh
Miss Grace Anderson, 528 Walnut Street, Statesville
Joseph D. Biggs, 220 Chamberlain Street, Raleigh

Dr. C. H. Bostian, 2208 Hope Street, Raleigh
C. S. Brimley, N. C. Department of Agriculture, Raleigh
H. H. Brimley, N. C. State Museum, Raleigh
Mrs. E. M. Brown, Washington
Mrs. Turner B. Bunn, 509 Falls Road, Rocky Mount
Mrs. Charles C. Cheek, Sanford
The Rev. Francis H. Craighill, 225 N. Church Street., Rocky Mount
H. E. Craven, 1710 Park Drive, Raleigh
William Craven, 1710 Park Drive, Raleigh
Ford Davis, Zebulon
Harry T. Davis, N. C. State Museum, Raleigh
Mrs. M. Dollar, 201 Park Avenue, Raleigh
Mrs. L. M. Dye, 701 N. Blount Street, Raleigh
Miss Louise Eaton, Oxford Orphanage, Oxford
Mrs. Minnie H. Eliason, Mitchell College, Statesville
Miss Nancy Eliason, Peace Junior College, Raleigh
J. S. Farmer, Tenacres, R. F. D. #1, Raleigh
Miss Ethel B. Finster, Box 5015 Biltmore Station, Asheville
Mrs. Miles Goodwin, 120 Hillcrest Road, Raleigh
R. W. Green, 2818 White Oak Road, Raleigh
Mrs. Charlotte Hilton Green, 2818 White Oak Road, Raleigh
The Rev. John H. Grey, Jr., 1719 Park Drive, Raleigh
Miss Margaret Habel, 327 E. Jones Street, Raleigh
Earl H. Hall, W. C. of U. N. C., Greensboro
Dr. T. P. Harrison, 1800 Park Drive, Raleigh
Milford W. Haynes, Box 731, Tarboro
Miss Clara Hearne, Roanoke Rapids
Bert Heidelberg, Jr., N. C. S. Box 3133, Raleigh
Mrs. G. H. Holmes, Tryon
J. S. Holmes, N. C. Dept. Conservation and Development, Raleigh
Mrs. J. S. Holmes, 302 Forest Road, Raleigh
Mrs. Samuel Hoshour, Mansion Park Hotel, Raleigh
Miss Lida Hutchings, Pine Bluff
Mrs. Frank C. Kugler, Washington
Miss Eva Mangum, R. F. D. #1, Morganton
Lacy L. McAllister, Pilot Insurance Company, Greensboro
Dr. Z. P. Metcalf, N. C. State College, Raleigh
Ralph H. Mozo, 406 E. Ninth Street, Greenville
Mrs. Ralph H. Mozo, 406 E. Ninth Street, Greenville
The Rev. J. J. Murray, DD., 6 White St., Lexington, Virginia
Miss Katherine V. Nooe, Statesville
Mrs. Louis W. Payne, 1920 Sunset Drive, Raleigh
Dr. T. Gilbert Pearson, 1775 Broadway, Room 841, New York City
Miss Dorothy Rivers, 530 N. Person Street, Raleigh
Dr. Ben F. Royal, Morehead City
Mrs. Nellie F. Sanborn, Birdhaven, Southern Pines
Dr. A. D. Shaftsbury, W. C. of U. N. C., Greensboro
Mrs. W. B. Shannon, Pine Bluff
Miss Mary Shelburne, City Museum, Washington

John J. Sigwald, Box 1197, Wilson
Mrs. A. J. Skaale, 3401 Hillsboro Street, Raleigh
Dr. D. T. Smithwick, County Historian, Louisburg
R. A. Urquhart, Lewiston
Mrs. H. E. Wilson, Parkview Apartments, Raleigh
R. H. Witherington, Box 3253 N. C. S., Raleigh

Notes from Eastern North Carolina
J. J. Murray, Lexington, Virginia.

In the course of field trips made in recent years in eastern North Carolina, and particularly in Robeson County, I have collected some records which amplify the data given on certain species by Pearson and the Brimleys in "The Birds of North Carolina".

Southern Robin (*Turdus migratorius achrusterus*): In "The Birds of N. C.," it was stated that the southern limit of the range of this bird in North Carolina had not been worked out. That point may have been cleared up by this time. At any rate I have found it to be a not uncommon breeder at Red Springs, Robeson County, only twenty miles from the South Carolina line and about a hundred miles from the coast. It has the same status at St. Pauls, in the northern part of that county, and at Raeford, Hoke County. I found a few at Greenville, Pitt County, May 4-10, 1936, where they appeared to be settled for nesting, and where I was told that they did nest occasionally.

Loggerhead Shrike (*Lanius l. ludovicianus*): I have found this bird fairly common in May in Robeson County. It was fairly common at Greenville, May 4-10, 1936.

Starling (*Sturnus v. vulgaris*): This bird seems now to have covered eastern North Carolina. It is a fairly common breeder in Robeson County; I saw several pairs feeding young at Greenville on May 5, 1936; and found it common at Lake Mattamuskeet the following day. It is still scarce as a breeder at Blowing Rock and other higher points in the west.

Swainson's Warbler (*Limothlypis swainsoni*): At the time of the publication of "The Birds of N. C." the only record of a nest for the State was from Edenton. I have been surprised to find the bird nesting as far inland as Robeson County. In "The Auk", October, 1935, p. 459, I reported an empty but new nest at Red Springs on May 2, 1935; another nest on May 6 with one egg; and a bird seen at still a third place. I found a pair in the same swamp on May 4, 1936, but did not locate the nest.

Yellow Palm Warbler (*Dendroica palmarum hypochrysea*): This bird is said, in "The Birds of N. C.", to winter "at least sparingly in the east". Skinner does not list it in his book, "A Guide to the Winter Birds of the North Carolina Sandhills". In ten winter trips to Robeson County, I have found it one time, when a few were feeding at the edge of a swamp near Red Springs, January 15-17, 1929.

Yellow-breasted Chat (*Icteria v. virens*): A contribution to the first issue of "The Chat" would not be complete without a reference to the sprightly bird which is the living original of its name. Pearson and the Brimleys state that this bird "appears to be absent from the eastern border of the State". I have previously recorded it (*The Auk*, October, 1930, p. 576) as having been fairly common in thickets on the edge of a savannah near Shannon, Robeson County, on May 17, 1930. I also saw it near Red Springs on May 7, 1935. Messrs. C. S. Brimley and John H. Grey and I found three at Atlantic Beach, Carteret County, May 11, 1936. I had not seen it in Pitt County, where I had spent the previous week, nor at Lake Mattamuskeet, where I visited on May 5.

Redstart (*Setophaga ruticilla*): This is another species which in "The Birds of N. C." is listed as only a transient in eastern Carolina. I found it common at Red Springs, May 12-22, 1930. My sister-in-law, Miss Mary Linda Vardell, has found a nest on the campus of Flora Macdonald College. I saw one, which may have been a transient, at Lake Mattamuskeet on May 6, 1936.

Towhee (*Pipilo erythrophthalmus*, subsp.?): Robeson County should be added to the breeding territory of this bird, but I have not found it common there in the breeding season. It was fairly common, May 12-22, 1930. I saw one at Red Springs on April 29, 1935; one at St. Pauls on May 2; and found it common in one spot between Red Springs and Shannon on May 7. The status of the Towhees of this region is of some interest. Certainly the summer and winter birds are of different races. All birds which I have been able to observe closely in winter have had red eyes. Three which I watched at close range on May 7, 1935, had light eyes, two of them light brownish yellow, and the other straw-colored. It will take some judicious collecting to refer the breeding bird to its proper race. I venture to suggest that they will turn out to be intermediate between canaster (the Alabama Towhee) and alleni (the White-eyed Towhee). Curiously enough, Towhees which I was able to study at close range at Atlantic Beach, while in company with Messrs. C. S. Brimley and J. H. Grey on May 11, 1936, had red eyes. The eyes of one bird, indeed, approached an orange color, but it was nearer red than yellow.

Additions to the List of Raleigh Birds
C. S. Brimley.

In November 1930, I published a list of the Raleigh Birds in the JOURNAL OF THE ELISHA MITCHELL SCIENTIFIC SOCIETY (Vol. 46, No. 1). This list included 215 full species, for where two or more subspecies of the same species occurred they were listed as one species. The following list brings our total species to 221.

Ring-necked Duck (*Nyroca collaris*). Common on Lake Johnson, in numbers varying from 12 to 120. Earliest date October 27, latest April 13. Only observed in winters of 35-36 and 36-37. If noted in previous years it must have been taken for Lesser Scaup.

Golden-eye Duck (*Glaucionetta clangula americana*): March 2, 1936, Dec. 1, 1936 to March 9, 1937. Observed in all on ten occasions, one to three birds on each.

Ruddy Duck (*Erismatura jamaicensis rubida*): Jan. 21, 1933, Nov. 21, 1933, Nov. 26, 1935 to April 13, 1936. Oct. 27, 1936 to present (3-9-37). Mostly on Lake Johnson. Largest lot seen, thirty.

Canvas-back Duck (*Nyroca valisineria*): Lake Johnson, Dec. 10, 14, 21, 1936. One seen on each occasion among flock of Ringnecks. (All duck records principally by J. H. Grey, partly aided by Roxie Collie and myself.)

Ring-billed Gull (*Larus delawarensis*): Nov. 25, 1932, adult killed by an auto.

Laughing Gull (*Larus atricilla*): Nov. 15, 1932, immature bird killed on Lake Raleigh.

A Yellow-Crowned-Ruby-Crowned Kinglet
Nellie F. Sanborn, Birdhaven, Southern Pines

I hasten to share an unusual experience with you. I was loitering before my kitchen window, which is a large one with 20 panes of glass. Outside is a big Scuppernong grape vine that comes within a few feet of the window, and when I am supposed to be working at the sink my eyes are usually focused outside to see what is going on in and around the grape vine.

I caught a glimpse of a little olive gray bird about one half the size of an English sparrow. He had such a quick fidgety motion catching insects on the vines I had to keep a sharp watch until I caught some of his identification marks. There was a

white eye ring, short stubby slightly notched tail, and two wing bars that came together forming a pattern on the back that I have not seen in illustrations. As I watched him, he stopped in front of me, laid the feathers on the top of his head to each side, like opening a book, and showed the most gorgeous ruby crown I have ever seen. I forgot every thing, and watched for another exhibition, for one of my bird books says "out of 100 ruby-crowns seen in the Sandhills during the winter only five showed any sign of a crest".

My ruby crown was flashing rubies often when I espied another bird exactly like him, and I thought ah ha! a female (they have no crown) and that is why you are showing off. Suddenly they were within a few inches of each other on the same vine, when No. I gave a fine exhibition of his beautiful ruby-crown. Instantly, as much as to say "if you think your crown is beautiful, look at mine", and a light yellow crown was lifted. I was nearly breathless from excitement, for I knew I had witnessed an unusual sight.

When the show was over, I hastened to my bird books, and one after another did not mention a yellow crown. The last book I looked at did, and that is what saved my reputation from "seeing things that isn't". In that book, Birds of North Carolina, by T. Gilbert Pearson, C. S. Brimley and H. H. Brimley, I read, "The Yellow crown patch appears to be quite unusual, as out of 44 specimens only three were found with a yellow crown." Do you wonder I was thrilled?

(C. S. Brimley reports 3 specimens of the Yellow-Crowned-Ruby Crowned Kinglet from Raleigh, taken in 1886 and 1889, Editor.)

FIELD NOTES

GREENSBORO. The summer and fall of 1936 furnished some interesting observations on bird life about Greensboro. The first hint of these happenings was shown in 1935, when several nests of the Chipping Sparrow were found with dead fledglings and one with the occupants starving. The starving birds were fed for several days to no avail. Earlier notes convey the fact that this was recorded as not unusual for these birds about our homes. About mid-June of 1936 the following happenings were noted: two nests showed the parent dead on the incubating eggs; three nests held starving fledglings at different stages of maturity. Similar nests were found at different times throughout the nesting season. Of a total of eleven nests under observation five showed this disease-stricken state. This high rate of mortality led to the belief that this was unusual among the bird population. How extensive were these happenings was not determined, as the work was

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done about the immediate dwellings. On examination the dead birds showed extreme emaciation, and the feathers about the vent were covered with white excrement. This superficial observation led to the conclusion that these birds had something like the common poultry disease called coccidiosis.

Later in the fall of 1936 this disease was further established by Lacy L. McAlister, who furnished a Wood Thrush and a Veery dead from some disease. These birds showed the same besmeared state that the Chippies did. McAlister further related peculiar actions of some English Sparrows, which appeared to weave and stagger as they came to feed at the station. Later, dead birds were found about the station for some time. It was at this same station that the two thrushes were found. It is granted that not enough work has been done to draw any conclusions; but if these things are repeated in 1937, more and better work will be undertaken. However, it is to be hoped that the occurrence will not be repeated and that the bird population will increase instead of decline.

---Earl H. Hall

Statesville. I was delighted to hear Dr. J. J. Murray call the Song Sparrow his favorite bird in his speech before the statewide meeting of bird lovers in Raleigh. The Song Sparrow has not until recently had his name on the list of permanent residents for Statesville. Three years ago a member of our Audubon Club heard his song through the summer. Investigation disclosed a nest in the shrubs of a nearby stream-crossed meadow. It was thought that the pair had a quixotic turn of mind that year, but in 1934 more nests were reported elsewhere in town. To date the birds are permanent residents and on the increase.

Through the misty gloom of the past months I have heard his delicious melodies making summer of our discontent. With field glasses I have watched him in his music hall - an old maple sprout that thrusts a spear through the honey-suckle hedge - feet aslant a twig, feathers windblown and mist laden, trilling his sweet repertoire.

---Grace Anderson

Rocky Mount. Saw small flock Rusty Blackbirds 3-8-37 with individuals in three phases of plumage. They are rather unusual birds here, or perhaps we only identify them when we get a clear view. No doubt they often pass at a distance as Redwings. The latter are now abundant, as are Chipping Sparrows.

---Francis H. Craighill

Lenoxville. Plans are now underway to have a fire lane fifty feet wide cut around the Lenoxville Rookery to protect the Egrets and Herons which use there every year. In 1935, Capt. Goodwin, warden of the Audubon Association, was unable to check a woods fire which started southeast of the rookery. The flames spread to the rookery and it is estimated that thousands of nestlings and immature birds were baked alive. The birds which escaped returned to nest in 1936. Since the rookery is such an important one the Audubon Association is making every effort to secure the fire lane.

---THE BEAUFORT NEWS 2-27-37

Beaufort. Late last fall a Mockingbird came several times a day to our window trying to get in. It would fly against the panes till it found it could not come inside, then it would sit for a long time on the window sill before flying away. These visits were kept up for two weeks or more, then it disappeared. About the first of March a Mockingbird came to the feeding tray, and I am wondering if it is the same one. Our place is so public that not a great variety of birds visit the feeding trays or yard. The first week in March a lone Robin came for a few days. Only starlings and English Sparrows came to the trays during the coldest weather.

---Mrs. L. Felton

Raleigh. 10-36 to 3-16-37: Water birds - Ducks were noted on Lake Johnson and Lake Raleigh from 10-10-36 thru 3-16-37, most numerous species was Ring-necked which occurred during whole period in numbers from 12 to 60. Ruddy were the next commonest, not more than 15 or 16 observed on one day except 10-28 (30). Black were third commonest. Mallard-one 12-21 and 2-15. Baldpate 10-27- (12), 11-24 (8), 3-16 (pr.) on Loneyard Lake. Pintail 12-10 and 14 (1 each), Shoveller 3-16 (pr.) Boneyard Lake. Wood duck 10-27 (15). Blue-winged Teal (pr.) Lake Myra, 2-19 (Grey). Canvasback (1) 12-10, 14, 21. Lesser Scaup a few from 10-24 to 1-26, and 3-17 (1). Golden-eye one to three 12-1 to 3-9. Puffle-head 12-14 (1 fem.) full plumaged m. and 2 fem. 3-16. Old Squaw 12-21 (1). Pied-billed Grebes were seen all through the winter thus definitely changing their status from that of transient to that of winter visitors. Horned Grebe, 12-10 (Grey); Great Blue Herons were seen about once a month but Kingfishers only on 12-21 and 1-26.

(Observations by: R. Collie, Grey and C. S. Brimley.)

Raleigh. Land Birds: Marsh Hawk 3-9 (Grey, Collie, Brimley) Purple Grackle 3-9- (2). Yellow-throated Warbler 3-9-singing, seen next day (Mrs.Green). Siskins-35 on 2-2 and 125 on 3-7 (Brimley with intervening records by Wm. Craven, Green and Joe Biggs).

Blue-headed Vireo near Lake Johnson 3-9 (2, Collic, Grey, Brimley-seen same place and date last year). Chipping Sparrow 2-28 (Wm. Craven) The Siskins were the first noted in Raleigh since Spring 1923.

---C. S. Brimley

BIRD BANDING

Ocracoke. A bird, said to be a Labrador Gull, was caught in a net in Pamlico Sound, a mile or two east of Ocracoke, about Feb. 1, 1937. The bird bore a band numbered 36-643530. The Biological Survey reports it was a Herring Gull, banded July 26, 1936, at Kent's Island, New Brunswick, Canada by W. A. O. Gross.

---Harry T. Davis, Raleigh

Raleigh. In the last published BIRD BANDING NOTES (Aug. '36) sent out by the Biological Survey but one Brown-headed Nuthatch was banded in the whole country. Jesse Primrose of Raleigh did that one. In the same issue only 10 Summer Tanagers were reported banded for the entire country - 7 of these were the ones I banded last summer, two of them adults and five young a week out of the nest. Following the heavy snow of 2-28-37 we trapped and banded 12 Myrtle Warblers, also Pine Warblers, Juncos, White-throated Sparrows, Carolina Wrens and a White-breasted Nuthatch. Made first record for brown creeper, (a bird difficult to trap) caught it in a tree-trunk trap 1-1-37. Have returns on 10 of the 46 Whitethroats banded at our station last year.

---Charlotte Hilton Green



The Chat

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JOHN H. GREY, JR., EDITOR
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ADDITIONS, CORRECTIONS TO NORTH CAROLINA BIRDS

C. S. Brimley

Since the "Birds of North Carolina" was published (1918) a number of species and subspecies have been added to the list, the rank of one form has been changed, and two others should probably be dropped from the list so that a short article on the subject seems timely.

First as to the treatment of subspecies. In the book these were put on the same level and both included in the count. It seems however that only full species should be counted in the total and this was actually done by Dr. T. Gilbert Pearson when in his introduction to the "Birds of America" he gave the number of birds recorded from North Carolina as 331, while the "Birds of North Carolina" lists 343, the difference being that Pearson dropped subspecies from the count.

Furthermore, in the Preface to the "Birds of America", this statement occurs "This subspecific distinction is often based upon very inconsiderable differences of little or no significance to the lay student of birds while the character of the bird remains unchanged". Thus a Pine Warbler and a Palm Warbler, though very much alike, differ from one another in a much greater degree than a Palm Warbler does from a Yellow Palm, or a Wayne's Warbler from a Black-throated Green.

The total number of birds listed in the "Birds of North Carolina is 343, (the last bird, Bluebird, is numbered 342, but the two preceding are both numbered 341), of these 321 are listed as full species, but one of these has since been reduced to subspecies of a form also included, reducing the number of full species to 320, two species should in addition be dropped from the list reducing it still further to 318, and eighteen full species have been added bringing the total up to 336, or five more than Pearson lists in his "Birds of America". The itemized list of additions and corrections follows.

A. Species not previously recorded from North Carolina:

1. Yellow-billed Tropic Bird (Phaethon lepturus catesbyi Brandt). One seen by a party from the U. S. Fish Commission Laboratory 20 miles off Cape Lookout, on or about August 12, 1936. R. COLLIE.

2. Great White Heron (Ardea occidentalis Aud.). One killed at Crystal Lake near Durham, July 8, 1926, by unknown person who got scared when he found the killing was illegal and started to bury it. The body was rescued and skinned by some Boy Scouts, who sent it to C. S. Brimley, who made up the skin. Identified by Dr. T. Gilbert Pearson and afterward by the U. S. Biological Survey. Now in the State Museum collection.

3. Glossy Ibis (Plegadis falcinellus Linn.). Captain Tillett of the Bodie Island Coast Guard Station told Rev. F. H. Craighill of Rocky Mount, in June, 1936, that he had in the past seen five curious birds and killed one of them, they were described as follows:- "Bill like a curlew, legs like a heron, a little smaller than a heron, scarlet red color". On a later visit, Dr. Craighill found out that the birds had been killed in August or September, 1926, and on showing Captain Tillett the picture of a Scarlet Ibis in Reed's Bird Guide, he at once said it was too red, and picked on the Glossy Ibis as being the right color. Two other men who had seen the birds also picked out the Glossy Ibis, no one of them knowing at the time that the others had done so. Information from REV. F. H. CRAIGHILL.

4. Roseate Spoonbill (Ajaja ajaja Linn). One was seen on Smith's Island at the mouth of the Cape Fear in the spring of 1919 by Edward Fleischer of Brooklyn, N. Y., who communicated the news in a letter dated April 7, 1919, to T. GILBERT PEARSON.

5. Ruddy Sheldrake (Casarca ferruginea Pallas). Three killed out of a flock of five at Waterlily, Currituck county, sometime in 1886, recognized as this species by Mr. Fred Simonds of Reading, England. (G. B. Grimnell, Auk, Auk, Vol. 36 (1919), p. 561. This record is accepted in the Fourth Edition of the A. O. U. Check List.

6. European Teal (Nettion crecca Linn.). Given in the Fourth Edition of the A. O. U. Check List as "Casual or accidental in ***North Carolina".

7. Lapwing (Vanellus vanellus Linn.). A single specimen of this European species killed by Edward T. Noel near Siler City, November 12, 1926, and sent to State Museum in flesh. It is now mounted in the Museum. H. H. BRIMLEY

8. Pomarine Jaeger (Stercorarius pomarinus Temm.). One sent to State Museum in flesh from Ocracoke, October 19, 1933. It is also recorded from Cape Hatteras on April 18, no year given, by A. C. Bent in Life Histories of American Gulls and Terns, 1921, p. 13. H. H. BRIMLEY

9. Iceland Gull (Larus leucopterus Vieil.). One seen February 24, 1918, off the North Carolina coast, it followed the ship till it was off the Cape Fear, about 90 miles from shore. W. T. HELMUTH, Auk, April, 1920, p. 251, 1920.

10. Arkansas Kingbird (Tyrannus verticalis Say). One seen near Lake Mattamuskeet, Oct. 1, 1935, by EARLE R. GREENE (Auk, vol. 53, p. 83, January, 1936)

11. Starling (Sturnus vulgaris Linn.). This introduced bird was first taken in the state by W. F. Pate, who killed one out of a flock of three at Willard, December 12, 1919. Since then it has spread all over the state, the first seen at Raleigh, being on April 19, 1923. It breeds throughout its range.

12. Kirtland's Warbler (Dendroica kirtlandi Bd.). One seen at very close quarters at Rocky Mount, September 2, 1936 by Rev. FRANCIS H. CRAIGHILL.

13. Brewer's Blackbird (Euphagus cyanocephalus Wagler). Observed at Asheville Nov. 25, 1930, (one taken), April 6, 1931 (two seen in flock of Rustys), also Nov. 16 to Dec. 31, 1932, and Feb. 25 to Apr. 12, 1932. THOS. D. BURLEIGH, Wilson Bulletin, Vol. 45, pp 111-113, Sept. 1933. Also observed on the campus of Asheville School, Nov. 19, 1935, by R. B. WALLACE, Auk, Apr. 1936.

14. Evening Grosbeak (Hesperiphona vespertina Cooper). A male and female killed at Chapel Hill, March 8, 1922 from a flock which had stayed around the campus for several days, by Dr. W. C. COKER. Also seen at Salisbury, of the same year on Mar. 25 and Apr. 1, by E. M. HOFFMAN, E. E. BROWN, et als.

15. Dickcissel (Spiza americana Gmelin). A pair seen at Raleigh, on May 19, 1928, by L. H. SNYDER, L. A. WHITFORD and C. S. BRIMLEY. Also heard singing by J. C. CRAWFORD at Hendersonville, on Aug. 6 of same year, at least two birds being heard. In that same year there was quite an invasion of the Atlantic Coast states by this species.

B. Species extinct at least in North Carolina, and mentioned but not deemed entitled to recognition as North Carolina birds in the "Birds of North Carolina".

1. Passenger Pigeon (Ectopistes migratorius Linn.). Some additional data has come to light on this species. They were observed near Durham, (Riggs Mountain) as late as 1880 feeding on the acorns of a variety of dwarf oak. E. A. SELMAN. Large flocks were seen flying over in Guilford County in Nov. 1880 and a number stopped to roost in a clump of pines. One boy killed seven. J. J. BLAIR (March 9, 1934). I was also informed by G. M. GARREN that when a boy (in the eighties) he had seen enormous flocks near Asheville, but according to his mother they were small compared to what she had seen in the past.

2. Carolina Paroquet (Conuropsis carolinensis Linn.). "Birds of North Carolina, p. 183.

3. Ivory-billed Woodpecker (Campephilus principalis (Linn.). BIRDS OF NORTH CAROLINA p. 188

C. Hybrid Warblers

1. Brewster's Warbler (Vermivora leucobronchialis Brewster). Raleigh, Sept. 6, 1888, female, taken by H. F. BRIMLEY. Chapel Hill, one seen Aug. 25, 1932, by E. P. ODUM.

2. Lawrence's Warbler (Vermivora lawrencei Herrick). Rocky Mount, one seen June 26, 1935 by Rev. F. H. CRAIGHILL and HUGH BATTLE, JR., and determined by being compared with the picture in Reed's "Bird Guide". Another seen next day by Dr. Craighill. The bird on each occasion was busily engaged in picking insects from the base of the flowers of the Trumpet Creeper. Both were seen at close quarters.

D. Additional Subspecies

1. Hutchin's Canada Goose (Tranta canadensis hutchinsi Rich.) One taken on Currituck Sound in 1888. W. C. MCATTEE, Auk, Vol. 43, p. 251-2, 1926.

2. Black Duck. Now divided into two subspecies, the Red-legged Black Duck (Anas rubripes rubripes Br.), and the Common Black Duck (Anas rubripes cristata Br.). Both occur in North Carolina in winter, and the latter breeds sparingly in coastal section.

3. Texas Bob-white (Colinus virginianus texanus Lawr.). Introduced of late years into central North Carolina to increase the population of "quail". I think all our specimens came from northern Mexico.

4. Eastern Screech Owl (Otus asio naevius Gm.). The Screech Owl has been divided into two races in the east, the present one inhabits the western part of the state and northward, while the Southern Screech Owl (Otus asio asio Linn.) occurs in the southeastern states as far north as eastern Virginia.

5. Florida Barred Owl (Strix varia alleni Ridg.). One taken on Pamlico River in Mid-January, 1930, by Dr. ALEXANDER W. THOMAS.

6. Florida Nighthawk (Chordeiles minor chapmani Coues). Breeds from central North Carolina southward according to the Fourth edition of the A. O. U. Check List.

7. Southern Flicker (Colaptes auratus luteus Bangs). Our breeding birds belong here. The winter birds are probably mostly the Northern Flicker (Colaptes auratus Linna.).

8. Florida Blue Jay (Cyanocitta cristata floridicola Coues). Occurs on the coast of North Carolina and southward, according to A. O. U. Check List, fourth edition.

9. Southern Crow (Corvus brachyrhynchos paulus Howell). From lower Potomac and Ohio Valley south. This would seemingly include the breeding crows over most of the State, while the winter birds would be at least mainly the Eastern Crow (Corvus brachyrhynchos Brachm.).

10. Prairie Marsh Wren (Teimatomytes palustris dissaeptus Bangs). Casual in migration to North Carolina. A. O. U. Check List, fourth edition. (Wayne's Marsh Wren (Teimatomytes palustris waynei Dingle and Sprunt), should replace Martin's Marsh Wren, No. 324 of the "Birds of North Carolina".)

11. Wayne's Warbler (Lerdia virens waynei Bangs). The breeding Black-throated Green Warblers of the cypress swamps of the east belong here, also the very early birds at Raleigh (in March and early April).

12. Northern Yellow-throat (Geothlypis trichas brachidactyla Sw.). I refer here to the migrating birds that pass through Raleigh in early May and have the reproductive organs undeveloped.

13. Athens Yellow-throat (Geothlypis trichas typhicola Burleigh). Described since the last edition of the A. O. U. Check List. Mr. Burleigh includes birds from the North Carolina coast from Tyrrell to New Hanover counties and others from Marion and Asheville. If this form is not allowed by the A. O. U. Committee, our resident birds on the coast would presumably be referable to the Florida Yellow-throat (Geothlypis trichas typhicola Chapm.).

14. Alabama Towhee (Pipilo erythrophthalmus arastor Howell). The breeding birds of the coastal plain belong here, but the White-eyed Towhee extends as far up at least as Beaufort.

15. Atlantic Song Sparrow (Melospiza melodia atlantica Todd). The breeding birds of the "Banks" belong here.

E. Forms listed as Species in "Birds of North Carolina" but now considered subspecies of other forms also listed.

1. Nelson's Sparrow (*Ammodramus caudacuta nelsoni* Allen). Listed as a full species but now considered a companion subspecies of the Sharp-tailed Sparrow (*Ammodramus caudacuta caudacuta* Gm) which also occurs on our coast.

F. Species dropped from the List.

1. Barrow's Goldeneye (*Glaucionetta islandica* Gm.). No authentic North Carolina records.

2. Swainson's Hawk (*Buteo swainsoni* Gm.). Although listed by Cairns from Buncombe County in his 1887 list, it was omitted in his later one and is therefore dropped.

These additions and corrections make the total number of species on record 336 as stated in the first part of this paper, and in addition two forms usually considered hybrids but actually well marked forms whatever their status. This number will however be brought up to 378 if we count subspecies.

WHY OF BIRD NESTS! H. H. Brimley

It would seem reasonable to suppose that closely allied species of birds, of similar habits, would select nesting sites and build nests more or less uniform in character, but the facts do not bear out such supposition.

Why do the five most common species of flycatcher that spend the summer in this part of North Carolina all build different types of nests in different situations?

The Crested nests in a hollow tree or limb, frequently - perhaps in a majority of cases - using a piece of shed snake skin in the construction of the nest; the Wood Pewee saddles its compactly-built nest on a comparatively heavy limb; the Acadian Flycatcher selects for a nesting site a very slender horizontal fork near the end of the swaying branch of a Dogwood, or other similar tree. In this fork it constructs a frail little cup so slight in structure that the eggs can sometimes be seen thru the bottom of the nest from below; the Phoebe picks out the side of a disused well, the supporting beams beneath the planking of a bridge, a shelf on the side of an overhanging boulder, or some similar situation for a nesting site, and it uses a quantity of soft mud for binding the structure together, while the Kingbird builds just a plain every-day bird's nest in just a plain every-day bush, or small tree.

Among the hawks, the Duck Hawk, where such sites are available, prefers a rock shelf on the face of an overhanging

cliff, while the Marsh Hawk nests on the ground. Other species of hawk nest in trees.

The Screech Owl and the Barred Owl prefer a natural hollow for the purpose of raising their young and the great Horned Owl more often than not deposits its eggs in a last year's nest of some large hawk, or that of a crow.

The Barn Owl has departed somewhat from the hollow-tree habit and often adopts the upper story of disused buildings for its nursery. A church steeple is also a rather favorite site.

The Snowy Owl and the Short-eared Owl nest on the ground while the Burrowing Owls deposit their eggs and raise their young underground. Why!

BIRD STUDY, GREENSBORO SCOUTS
Scoutmaster Lacy L. McAllister.

The course itself is a rather simple one. We are devoting four meetings to the subject of bird study. At the first week's meeting we had talks on how to study birds, and the requirements for the bird study merit badge. We also gave out Guilford County check lists to the boys.

The second meeting will be devoted entirely to the making of bird houses, the troop furnishing the lumber and nails, and each patrol bringing tools, etc.

At the third meeting patrols will report on lists of identified birds and any news items regarding feeding stations and bird houses. We will use a stereopticon at this meeting to show pictures of a composite list of birds seen during the month and additional birds to look for. A stereopticon will also be used to show pictures of twenty birds of value to agriculture, ten birds of value as destroyers of rats and mice, ten birds as destroyers of tree scale and lice.

The fourth meeting will be devoted to checking up on what has been accomplished with also a talk on the subject of "What a Scout Can Do to Help Protect Birds".

The main event of the month will be a trip to Raleigh by the entire troop on Easter Monday for the purpose of visiting the Museum.

Probably one of the most helpful features will be weekly bird hikes by patrols. Each patrol of eight boys will be accompanied either by an adult or junior leader who has done specialty work in bird study. These hikes will probably be conducted on Sunday mornings, and I know one or two patrols are planning to get out early enough to cook breakfast.

FIELD NOTES
Rev. Francis H. Craighill

ROANOKE ISLAND: It is well known that some birds, such as the Towhee, Barn Swallow and Song Sparrow, breed in the mountains and on the coast, but are absent in the breeding season from much of the intervening territory. Perhaps the Cowbird may be added to this class.

On Sept. 4, 1935, a large flock was seen near Nag's Head feeding with cattle - probably a migrating flock as in the rest of the state. But on June 27, 1936, a single adult male was seen on the narrow beach on the Sound side of Nag's Head, and later in the same day four Cowbirds were seen and clearly identified feeding around the feet of cattle near Mantoo. Flocks of 8 or 10 were seen on June 28 and 29, feeding with the cattle and perching on wires. Several small flocks, possibly the same birds, were seen in the air at the north end of the island. The majority of those seen with the cattle had the appearance of young birds. Feb. 25, 1937, a flock of about 40 was seen and studied perched in trees in the town of Manteo, and the next day a Boy Scout bird student at Wanchese reported having shot three out of a flock and said that he found a Biological Survey band on the leg of one of them. He and his companions considered them as year round residents, and called them by the local name of "Lice Eaters", probably from their association with cattle.

ROCKY MOUNT: The Pileated Woodpecker is already a rare bird in North Carolina, and squirrel hunters are making them rarer; but they are still widely distributed. One observer has seen them this year in four counties, from the coast to the mountains, Tyrrell, Hyde, Edgecombe and Henderson. Pine Siskins were seen frequently in Nash County during February, feeding on the ground and in sweet gum trees, but not in pines. One straggler chummed with a lone Myrtle Warbler and stayed in a back yard in the heart of the city from February 14 to March 3. At the point where Beech Branch crosses Highway 301 near Battleboro, Nash County, there is a wet meadow which is a favorite resort for Wilson's Snipe. They were there constantly this winter and even the snow and ice of last winter did not drive them away. On March 17th, fifty were seen in a space of about an acre. A flock of fifteen in close Sandpiper like formation came swinging in, and immediate inspection proved that they were really Snipe. The first Yellowlegs of the season, a solitary bird, was seen there on same date. The male birds of Redwings and Purple Grackles were well settled at their annual nesting places in Nash County by March 17th, and a few females were also present. Cowbirds and Rusty Blackbirds are also in evidence on their annual pilgrimage.

DUCKS AND GEESE

H. H. Brimley

On the morning of March 13, 1937, on a boat trip up New River, Onslow County, N. C., from the mouth of French's Creek to the mouth of Southwest Creek, a distance of about six miles, the following species of wild fowl were observed, the approximate number seen of each following the name of the species: Canada goose, 75; Canvasback, 100; Scaup - species indeterminable - mostly the Lesser Scaup, 2,000; Ruddy Duck, 700; Bufflehead, 500; Goldeneye, 5; American Scoter, 5; others not identified, 500. I had never before observed Bufflehead in locks.

PURPLE MARTINS

Seen in two sections of Pamlico County - in migration(?)
March 19, 1937, GEO. B. LAY.
Seen in Elizabeth City, March 9, 1937. Mayor JEROME B. FLORA, in News and Observer.

At the monthly meeting of the Raleigh Bird Club Monday, April 19, Dr. Z. P. Metcalf talked of "Warblers And Their Identification" and Mr. J. H. Primrose talked on "Adventures With Birds". Dr. Metcalf furnished mimeographed keys for the identification of Warblers.

THE BANDING OF HAWKS AND OWLS

A request for cooperators in a hawk and owl banding project has come to us from Mr. Richard H. Pough of the National Association of Audubon Societies. He writes: "The ordinary bird bander practically never has an opportunity to band hawks...If hawks and owls are to be banded in significant numbers, it must be done by hundreds of field observers, each of whom knows the location of a few nests and will get someone with tree climbers to go up and band the nestlings. Handicapped as it is by lack of funds, the bird-banding division of the Biological Survey cannot possibly issue regular banding permits to the number of people who might be in a position to assist with this valuable work. To overcome this difficulty, I have been issued a permit and bands for all sizes of hawks. Won't you urge your readers to send to me for any quantity from one up, that they can place on birds this spring, specifying species so that I can send correct sizes. A card will go with each band and will be returned to me when the band is placed on a bird, and I will clear all records, both with the Survey and the bander, when a return is recorded. Breeding grounds, wintering grounds, spring and fall migration, length of life, average yearly mortality---all these questions are awaiting more hawk banding to furnish the answers...This will be a good test of the willingness of the amateur bird man to make the effort necessary to help advance a branch of ornithological knowledge through cooperative effort."

*****THE RAVEN

ADDITIONAL CHARTER MEMBERS N. C. B. C.

J. C. Allison, 117 Hillcrest Road, Raleigh, N. C.
C. D. Benbow, Box 128, Tarboro, N. C.
Miss Cicely Browne, 408 Dixie Trail, Raleigh, N. C.
Dr. Wm. Hand Browne, Jr., State College Station, Raleigh, N. C.
Mr. C. M. Carson, 324 S. Tryon Street, Charlotte, N. C.
Mrs. S. N. Clark, Tarboro, N. C.
Mrs. O. J. Daniel, 2021 Fairview Road, Raleigh, N. C.
Mrs. Harry T. Davis, Raleigh, N. C.
Mrs. M. A. Davis, Washington, N. C.
Wade Fox, Jr., West Court Street, Greensboro, N. C.
N. Gist Gee, Greenwood, S. C.
The Rev. C. E. Gregory, First Presbyterian Church, Morganton, N. C.
Mrs. T. E. Hamnett, Edneyville, N. C.
Bertha Knox, Salisbury, N. C.
Mrs. J. C. Little, 1210 Hillsboro St., Raleigh, N. C.
H. C. Oberholser, Washington, D. C.
E. P. Odum, Cleveland, Ohio.
Miss Ann Westmoreland, Goldsboro, N. C.
A. S. Williams, Pinehurst, N. C.

SALISBURY and BLOWING ROCK: House Wren (3 pairs) nesting in bird box at Salisbury. Barn Swallow nesting at Blowing Rock.

BEAUFORT: One of the property owners objected to the improvements to the property in the proposed fire line to protect the Lenoxxville Heron Rookery, and the fire hazard still exists.

ORTON: Churchill Bragaw reports Water Turkey and Herons have arrived at this favored spot in New Hanover County.

HENDERSON bird lovers are planning a Henderson Bird Club, according to a communication from Miss Claudia Watkins Hunter

The Audubon Society, New York, acknowledges - with thanks - THE CHAT, and proffers the Club good wishes and cooperation. The Virginia Ornithological Society extends us a welcoming hand across the border.

N. Gist Gee, Greenwood, S. C., sends us Bird Notes for his State. With ornithologists at the Charleston Museum and elsewhere in South Carolina, a similar State organization should take form there.

EDITOR'S NOTE: Reminding: The North Carolina Bird Club was organized on Mar. 6, 1937, with a State-wide attendance of 75. It invites all those interested in birds to join. The cost is \$1.00 per year, and the CHAT is the official publication. Charter members are accepted until May 6, 1937.

With Editor John Groy in Scotland - in pursuit of birds new to him and his Doctorate - this issue of the CHAT is being prepared and mailed by the State Museum staff, with any necessary apologies.

Members over the State are reminded to make their interesting contributions for the CHAT. And let some ornithologist be so gracious as to make some concrete suggestions to beginners who earnestly wish to learn about our birds.

THE ANNUAL MEETING: V. S. O.

The Seventh Annual Meeting of the Virginia Society of Ornithology will be held in Richmond, Virginia, Friday and Saturday, April 23 and 24. The Jefferson Hotel will be the headquarters and all meetings will be held there. There will be two program sessions on Friday, at 2:00 and 8:00 P. M., with the annual dinner in between. The Field Trip, to which only the morning on Saturday will be given this year, will cover the Curle's Neck Region along the James River, where we had such an interesting trip during the former Richmond Meeting. Migrants should then be moving in full force through that part of the State. The starting time for the Field Trip will be announced at the Friday evening session. Mrs. Jurgens, Mrs. F. W. Shaw and Miss Sara Snook have graciously invited the members going on the Field Trip to be their guests at a picnic field lunch at the close of the trip.

----THE RAVEN

The price of "Florida Bird Life" by A. H. Howell, published in 1932, has been reduced from \$6 to \$3 postpaid. The book contains 579 pages and 37 color plates from original paintings by F. L. Jaques. Copies may be obtained from the National Association of Audubon Societies, 1775 Broadway, New York City, or the Commission of Game and Fresh Water Fish, Tallahassee, Florida.--
The Survey, January, 1937.

----THE RAVEN

LEXINGTON: Prairie Horned Lark - nest and fledgeling with adult female on Golf Course - April 13, 1937.

NELSON G. HAIRSTON, CHAPEL HILL

NOTE: The most southern nesting records for nesting are East Oklahoma, Arkansas, Missouri, Southern Illinois, Southern Indiana, West Virginia, Eastern Pennsylvania, and possibly New Jersey. (From "Birds of America" H.H.B.)



The Chat

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JOHN H. GREY, JR. EDITOR
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BIRDS OF AN ATLANTIC VOYAGE

John H. Grey, Jr.

Three things surprise you about the birds seen on an ocean voyage. First, birds are to be seen all the way across the ocean. Second, a severe storm which drives passengers indoors makes little difference to the birds; in fact, they seem to enjoy it. Third, most of the birds which you see are the ones that are seldom seen on land except when a storm drives them ashore.

Our ship sailed from Norfolk on April 2, 1937, reached Le Havre, France on the 12th, then crossed to London the next day. The return trip started at Southampton May 18 and the ship docked at Norfolk on the 27th. On each trip there was only one day on which we did not see birds; the day on which we were a thousand to fifteen hundred miles from the English Channel. Other observers have seen birds on each day of their trip. It is probable that gulls follow ships most of the way across and turn back with another ship when near land. As far as I could observe, this did not happen with us. Herring Gulls followed us out of Chesapeake Bay and were observed as far out as 1200 miles. The flock that started with us were about equally divided between mature and immature birds. This is easily noticed for the plumage of the mature bird is so different. Two days later there were no immature birds, and next day the only one we sighted was a bird with a broken foot which had not been with us previously.

On the outbound trip from Norfolk, we had a northeast gale that blew for five days. The wind often exceeded 60 miles an hour. Handlines had to be put up for the crew to cross the aft deck which was an open one. In spite of the storm and rough sea, there were five species of birds that followed the ship from time to

time. Often they would set their wings and catching a current of air sail into the wind much faster than the ship could sail. At night they settled down on the waves and rode them as securely as a cork floating on a millpond. Next morning they could overtake the ship in a short time.

One gets a thrill in seeing birds which are rarely seen on land except when a severe storm drives them toward shore. My best way to identify them was, with the help of R. T. Peterson's A Field Guide to the Birds (Houghton Mifflin \$2.75). This is the best book for field work. It is a pocket-size volume with illustrations in color and in black and white, with brief descriptions of the markings and habits which differentiate one species from another which is similar. It helps you to know what to look for in identifying any bird. Capt. Cross of the SS CITY OF BALTIMORE was also interested in birds and lent me his copy of Alexander's Birds of the Ocean (Putnam \$4.50). This is the authoritative book on oceanic birds. Peterson's book was my best help, for with it one can identify most of the birds he is likely to see.

All the way over I looked for the Petrels, or "Mother Carey's Chickens" as the sailors call them. Only two were sighted and these were too far away to identify. They are much like our Purple Martins with a broad white band across their rumps. These birds are seldom seen near land, spending their waking hours on the wing or "walking on the water." This latter habit got them their name by its suggestion of the Apostle Peter trying to do the same thing. They nest in a burrow which they dig in the sand or turf of islands far out in the ocean. On the trip home they were abundant for four days. The first were sighted when we were 1500 miles from Norfolk and the last I saw were skimming over the waves as night settled down when we were 150 miles from Cape Henry. Leach's Petrels were seen first. These have forked tails and a butterfly-like flight. When we got nearer shore none of these were seen and the first Wilson's Petrel was sighted. The two species did not overlap on this trip. Wilson's has a rounded tail, feet extended a little past the tail in flight, and a habit of flying more on a level than the Leach's. Wilson's have been recorded for North Carolina upon three occasions: 1893, 1899 and 1936.

Another family of birds seldom seen near land is the Shearwater. This is a gull-like bird, sooty brown or two toned, brown above and white below. Their distinctive habit is their flight just above the water in which they flap their wings rapidly several times and then sail. The Sooty Shearwater was more common. This is the one which is brown all over. We also saw many Greater Shearwater, the top of the head is blackish and sharply defined against the white of the throat. Some of the Shearwaters were usually in sight except when we were within a few hundred miles of land. The Fulmar is somewhat similar to the Shearwaters, but has an entirely different flight. Its wings are spread as stiff as a board and it will remain poised against a stiff gale or glide through the air with beautiful grace. Suddenly it will glide down to pick up some oily refuse in the wake of the ship.

In the English Channel we saw our first Gannet, a great white bird with black wing tips, and lemon color on each side of the head. This bird at times will rise to a good height and dive into the water after a fish. Sailors are said to nail a fish to a plank and tow it behind their boat to tempt the gannet who will dive for the fish and have its bill driven through the plank by force of its dive. The only ones seen were near the Channel.

Two other birds were of particular interest; Jaegers and Velvet Scoter Ducks. The Jaegers are dark falcon-like sea birds that are said to chase and plunder the gulls. I saw only the Parasitic Jaeger, and not many of them. The Velvet Scoters were abundant in the harbor of Le Havre. In every direction they were to be seen as black corks bobbing on the water. As the ship drew nearer they rose and flew a short distance before alighting. As they rose the white wing bars were almost startling in contrast to the black body of the duck.

The most common birds seen are the gulls. While gulls are really birds of the coast they followed our ship half way across the ocean. In some cases they have followed ships all the way across. Herring Gulls were the most numerous, then came Ring-billed. When we were 1200 miles from Norfolk on the outbound trip the Kittiwake Gulls began to circle around the ship and were in sight for the rest of the trip. Farther along we saw many of the Great Black-backed Gulls. On the homeward trip one lone Herring Gull followed us for a day out of Southampton and one day out of Norfolk another Herring flew over the ship, but gave us scant notice. No other gulls were seen till we reached Old Point Comfort.

Some Nests and Eggs of the Loggerhead Shrike

From "The Reporter" Spring Number 1935
The Washington Field Museum - Washington, D. C.
(Used by permission)

The Loggerhead Shrike (Lanius ludovicianus) our only shrike typical to the Coastal region occurs at Washington quite frequently, in winter. It begins breeding toward early spring, the breeding birds building their nests in shrubby growths several feet from the ground. As far as we have observed, the shrikes have a preference for sycamore trees as nesting sites in this vicinity.

The domain of the Loggerhead at Washington is a certain locality containing rather young or low-growing sycamores averaging fifteen or twenty feet in height. Nests are usually situated on the lateral branches about fifteen or twenty feet above the ground. Specimens examined were made of the following materials: (1) Twigs (Sycamore); (2) Bark; (3) Leaf Stems (possibly of Sycamore leaves); (4) Paper; (5) String - two sizes found; (6) Rags; (7) Grass Stems. Coarse twigs constitute the bulk, while dried grass stems and a few feathers form the linings. Shrike nests while of coarse

construction are certainly solid and of good make. It might be added that on such twigs prey may conveniently be hung, especially during the nesting season. As the Shrike impales its little victims, leaving them for possible future use, it has earned the name of "Butcher-bird." While the nests of preceeding years are not re-occupied, it is evident that they are used in the building of new ones.

On March 26 of this year (1935) the first eggs were observed. Since the female had been flushed from the nest on the preceeding day, we might refer to March 25 as the first date. The contents of the nest were five eggs of a light gray color. They were spotted rather thickly with purple. It is needless to state the difficulty of observing these eggs. A continued snapping of the bills of these birds, mingled with a harsh chatter were the notes of welcome given by both parents. These conditions left an uneasiness in the mind which could only be quenched by a retreating climb from the tree,

January and February are the months when our Loggerhead Shrike is usually heard in song. Harsh, creaking notes form its only musical qualities. The song of these birds has been likened unto the noise made by a rusty windlass.

As to the food habits of shrikes, we may add that ground snakes are to be found in its menu, while at Washington. Among the visitors to newly-plowed fields in spring, the shrike undoubtedly destroys untold numbers of insect pests. It is, however, more frequently associated with the smaller fields or garden plots, where it renders a good deal of service to the small cultivator.

This bird, so often confused with the Mocking Bird, is best identified by its drooping tail when it rests, dark band through the eye, and habit of flying very low after an abrupt descent from its respective perch. It has been rightly accused of hanging its victims (some song birds) upon thorns to decay, although its good qualities should overrule this cruel trait. Our shrike is sometimes termed "French Mockingbird". We must refer to our breeding bird as the true Loggerhead, it being the sub-species nesting in the coastal region. The other form, the Migrant Shrike, has been found breeding up the state.

101 Charter Members

The Secretary has received the names and dues of 101 people who joined the N.C.B.C. before the deadline of May 6. No members have been received since then. The membership is drawn from thirty communities scattered over the whole state and Virginia, South Carolina, Louisiana, District of Columbia, Ohio, New York and Maine. A good beginning for any club. The additional Charter Members are listed below:

H. Churchill Bragaw, Washington, N. C.
C. H. Brannon, N. C. Department of Agriculture, Raleigh, N. C.
Ralph Brimley, Central High School, Winston-Salem, N. C.
Miss Louise Busbee, 1818 Park Drive, Raleigh, N. C.
Coit M. Coker, Box 950, Chapel Hill, N. C.
Mrs. L. J. Francke, Glen Head, New York
G. M. Garren, 15 W. Lenoir Street, Raleigh, N. C.
George Seth Guion, 1701 American Bank Building, New Orleans, La.
Mrs. John V. Higham, Carroll Drive, Raleigh, N. C.
Miss Claudia Watkins Hunter, Henderson, N. C.
Joe Jones, The Chapel Hill Weekly, Chapel Hill, N. C.
Virgil Kelly, 212 Maple Avenue, Fayetteville, N. C.
Miss Marion C. MacNeille, Pinebluff, N. C.
Miss Flossie Martin, R. J. Reynolds High School, Winston-Salem
Mrs. Jasper L. Memory, 405 Washington Street, Whiteville, N. C.
Mrs. H. D. Pritchett, Box 1622, Charlotte, N. C.
H. A. Rankin, Jr., 228 Hillside Avenue, Fayetteville, N. C.
Miss Blanche Ross, Morganton, N. C.
Maurice E. Stimson, Logan Stimson and Son, Statesville, N. C.
Miss Ada B. Swan, Bryant Pond, Maine
Mrs. Isaac M. Taylor, Morganton, N. C.
Dr. James W. Vernon, Morganton, N. C.
D. L. Wray, N. C. Dept. Agriculture, Raleigh, N. C.

Omission in April CHAT

On Page 4 of the April number of THE CHAT, insert under "B"-
3. Ivory-billed Woodpecker (Campephilus principalis, Linn.)
BIRDS OF NORTH CAROLINA p. 188.

Information Wanted for Next Issue

The next number of THE CHAT will cover all data through July, and will appear in August. We would like to have any data regarding the spring migration: what birds you saw and when, the first time seen and last time. Also we would like to have a lot of information about nests: what bird nests did you find, were there eggs, young birds, or did you see the parents feeding young birds just out of the nests. The dates of these nestings are important so please include them. Also send in any other data you have.

Some Good Bird Books

BIRDS, Julius King, Bird Paintings by Allan Brooks. 10¢ each for three volumes, 60 pages each. The best book that is cheap - buy them at Woolworth's Ten Cent Store. Colors are good, made from plates lent by the Audubon Society.

BIRD GUIDE, Chester A. Reed, Doubleday, Page & Co., 230 pages, 75¢.
Handy for the pocket, but color not so good.

A FIELD GUIDE TO THE BIRDS, R. T. Peterson, Houghton Mifflin Co.,
167 pages, \$2.75. The best book for anyone who wants to identify birds, handy for the pocket, many illustrations and brief description of points to look for in identifying.

BIRDS OF AMERICA, T. G. Pearson, Doubleday Doran & Co., 1936. 561 pages, 106 plates in full color, \$3.95. A beautiful book which will increase in value in a few years.

The Prairie Horned Lark Nest

In the April issue of THE CHAT, Nelson G. Hairston had a note about finding the fledgling and adult of the Prairie Horned Lark (Otocoris alpestris praticola) at Lexington.

This is not only the first record of this bird nesting in North Carolina, but also the most southern record for the Atlantic slope. In 1934, Dr. J. J. Murray and I found four nests of the Prairie Horned Lark at Lexington, Virginia. The year before it had been found across the mountains at Lynchburg. Dr. Murray claimed for these nests the southern limit up to that time for the Atlantic slope, (AUK Vol. LI, p. 380). The same year another nest was found thirty miles south of Lynchburg at Naruna (AUK LI, p. 524). Last year the AUK carried a note of a nest found at Washington, D. C., the first for the District (LII, p. 346).

Since these birds often have two or more nests in a year we hope to hear more from Lexington ere long.

The Henderson Bird Club

Henderson organized their bird club with thirty members. Jas. Connell is the President. Miss Claudia Hunter and Mrs. Andrew Davis have been most active in getting the new club under way. Already they have had several field trips and carry a "Bird Corner" in the HENDERSON DAILY DISPATCH.

Field Notes

Pinebluff: Black-throated Blue Warbler and Rose-breasted Grosbeak were observed and identified by me April 18, 1937.

***Mrs. W. D. Shannon

Lewiston: Purple Martins seem to be growing fewer and fewer with us. They come each year between March 15 and 25. Their gourds

and boxes are always cleaned out, painted and stand on good strong poles where cats and rats cannot "break through and steal", yet today I have only six couples in my Martin Apartment which could house fifty four. Can any member of the Club tell me what is happening to them? Also had no Goldfinches on my feeding table this spring. I have for the first time hundreds of what I think are Pine Warblers.

****R. A. Urquhart

Carteret County: "The Open Grounds"

On May 23, Harry Davis and I made a trip through the "Open Grounds", a very peculiar tract of country lying northeast of Beaufort, between South River, which empties into Neuse River estuary, and North River, which flows south into Core Sound.

We drove for approximately twenty miles through this wild tract, which takes its name from the complete absence of trees, nothing but low bushes, ferns and other low growth showing over a territory that I estimated to be forty or fifty thousand acres in extent. Of course there is a growth of higher bushes along the banks of some of the larger drainage canals that intersect the tract; otherwise, it might well be called "barren grounds". I have known of the place as a fine territory for deer hunting for many years, and Davis had been through it before, but this was my first experience there. Davis had already told me of the scarcity of bird life in this area, but I could never have imagined that a drive of twenty miles through any wild section of eastern North Carolina could have resulted in the identification of only three species of birds, and very few of each species seen.

Even though driving at a very moderate rate of speed, we saw only the following: Crows (7), Red-winged Blackbirds (3 or 4), Quail (1). We also observed a medium-sized woodpecker - probably a Red-bellied, and one small bird that looked like a sparrow of some kind was seen to fly down the road ahead of the car. As this place has been stocked with Mexican Quail, the one seen very likely belonged to that race. Verily, the "Open Grounds" offer little to the bird lover!

****H. H. Brimley

Rocky Mount: First observations for spring migration 1937. Chipping Sparrow (3/4), Rusty Blackbird (3/8), Cowbird (3/10), Purple Grackle (3/11), Yellow Legs (3/16 - Species ?), Purple Martin and Bittern (3/22), Maryland Yellow Throat (3/23), Black and White Warbler and Great Blue Heron (3/29), White-eyed Vireo, Louisiana Water Thrush and Rough-winged Swallow (4/1), Osprey (4/2), Blue-gray Gnatcatcher (4/3), Yellow-throated Warbler (4/8), Water Thrush, Hooded Warbler and Yellow-throated Vireo (4/9), Chimney Swift (4/11), Long-billed Marsh Wren, Tree Swallow and Black-crowned Night Heron (4/12), Kingbird and Spotted Sandpiper (4/14), House Wren (4/16), Redstart (4/17), Wood Thrush, Prothonotary Warbler, Red-eyed Vireo, Greater Yellow Legs, Yellow Palm Warbler, Little

Blue Heron, Solitary Sandpiper and Prairie Warbler (4/19), Catbird (4/20), Grasshopper Sparrow, and Crested Flycatcher (4/21), Rose-breasted Grosbeak (4/22), Orchard Oriole (4/23), Bobolink and Yellow-breasted Chat (4/24), Barn Swallow (4/25), Golden-winged and Parula Warbler, Summer Tanager (4/26), Nighthawk, Scarlet Tanager and Yellow Warbler (4/27), Green Heron and Ruby-throated Hummingbird (4/28), Wood Pewee (4/29), Blue Grosbeak (4/30), Ovenbird (5/1), Egret (5/2), Indigo Bunting, Black-throated Blue Warbler, Blue-winged Warbler, Bicknell's Thrush and Veery (5/3), Yellow-crowned Night Heron, Gray-checked Thrush and Cuckoo (Sp. ?) (5/10), Blackpoll Warbler (5/11), Pectoral and Least Sandpiper and Kentucky Warbler (5/13).

Last Observations: Pine Siskin (3/4), Yellow-bellied Sapsucker (3/11), Fox Sparrow (3/22), Golden-crowned Kinglet, Brown Creeper and Purple Finch (4/3), Pigeon Hawk (4/8), Song Sparrow (4/12), Ruby-crowned Kinglet (4/13), Junco (4/15), Horned Grebe (4/16), Hermit Thrush (4/19), White-throated Sparrow (4/20) (C. D. Bonbow), Blue-winged Teal (4/21), Red-breasted Merganser and Wilson's Snipe (4/26), Piedbilled Grebe (4/29), Myrtle Warbler (5/5), Savannah Sparrow (5/7), Greater Scaup Duck (5/14).

****F. H. Craighill

Raleigh: Loon (5/18), Pied-billed Grebe (5/20) (R.C.), Solitary Sandpiper (5/7-20), Greater Yellowlegs (5/16) (R. C.) Least Sandpiper (5/18-20), Semi-palmated Sandpiper (5/18), Yellow-billed Cuckoo (5/15) (R.C.), Wood Pewee (4/19), Acadian Flycatcher (5/1) (R.C.), Pine Siskin (4/2), White-throated Sparrow (5/18), Swamp Sparrow (5/2), Indigo Bunting (5/1), Scarlet Tanager (4/30-5/18), Cedar Waxwing (5/15), Prothonotary Warbler (5/16) (R.C.), Magnolia Warbler (5/18), Worm-eating Warbler (5/18) (R.C.), Water Thrush (4/27-5/18), Yellow-breasted Chat (5/1), Catbird (4/23), Wood Thrush (4/21), Veery (5/3 - in back yard) (Dr. Wm. Hand Browne, Jr.), Gray-checked Thrush (5/18-22) (R.C.)

****C. S. Brimley and Roxie Collio



The Chat

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WORLD-WIDE PROTECTION OF BIRDS

By Dr. T. Gilbert Pearson, Chairman
New York City

The International Committee for Bird Preservation was founded on June 20, 1922, when in response to invitations by the writer, prominent ornithologists of England, France and Holland met with him in London to discuss a plan for stimulating international cooperation in bird protection. After due deliberation, Lord Edward Grey of Fallodon offered a motion "that for the purpose of coordinating and encouraging the preservation of birds, it is desirable that an International Committee should be constituted and that steps should be taken to have such a Committee formed by asking societies in different countries interested in the preservation of birds to nominate members to form such a Committee."

The motion was unanimously adopted.

On subsequent occasions, in order to arouse interest in extending the organization, the writer visited thirteen European countries, some of them several times. Leading scientific and conservation organizations have now formed national sections in twenty-eight countries distributed through all the continents, as well as in Australia and New Zealand. It has been my pleasure to preside over the meetings of this movement held on an average of about every two years. These assemblies have been in London, Paris, Luxembourg, Geneva, Amsterdam, Oxford and Brussels. The next international gathering is planned to convene in Rouen in May 1938.

The Vice-chairmen of the Committee are the well-known ornithologists, Jean Delacour of France and Dr. P. G. Van Tienhoven of Holland. The chief secretarial office is in Brussels, in charge of Leon Lippens. The Sub-secretary is Miss Phyllis Barclay-Smith whose office is at the London Zoological Gardens.

In Europe, the work of the Committee has dealt with many problems, notably oil pollution, market and shipments of migratory Quail, the western European wild-fowl situation, and especially deliberations concerning amendments to the Paris Bird Treaty of 1902. This treaty, the first in the world for bird protection, although it contains many good points has proved to be very inadequate. After many years of discussion a tentative agreement regarding necessary changes was adopted by the European Sections of the International Committee at their three-day session held in Vienna during July of this year.

Since retiring as President of the National Association of Audubon Societies in October 1934, after thirty years constant service in its behalf, I have been devoting my entire time to this International Movement, especially as it affects birds in the Western Hemisphere. This work is also officially one of the branches of the National Association of Audubon Societies. Of late it has been possible, with the aid of the United States diplomatic and consular service, to secure copies of all the laws affecting bird-life in the West Indies, Central America and South America. With few exceptions there are appallingly few laws to protect wild birds and mammals. Ten of these countries have not the slightest protection for birds, and in many others the laws are very inadequate. For example, in Honduras the only place wild-life is mentioned in the statutes is in a sentence which makes it illegal to hunt game with rifles of the same calibre as used by the Honduran Army!

The only countries in the Americas that have anything like a serious system of bird and game laws, increasingly supported by public opinion, are Canada and the United States. There has been a pronounced awakening on the subject in Argentina and to some extent in Brazil, but in most of the other countries there is little done in the way of bird preservation as we in this country understand the subject.

The bird treaty between the United States and Canada, which became operative in July 1918, was in March 1937 amended to include similar treaty regulations with Mexico.

To stimulate further cooperative activity between the three countries, the annual convention of the International Association of Game, Fish and Conservation Commissioners was held in Mexico City, August 23-27, 1937, which the writer was privileged to attend. Many state game department and federal officials, as well as representatives of conservation organizations, were at this important gathering.

To my mind, it is clearly our duty to acquaint the people of other American countries with the experiences of Canada and the United States in dealing with bird-preservation problems, to the end that their peoples may profit by our successes and our many errors.

Furthermore, we have a very great personal interest at stake. Many of our birds pass nearly as much of the year in countries to the south of us as they do in their summer nesting and their migration territories. If the birds are preserved only here and are killed with little restraint after they cross our southern boundaries in autumn, what doth it profit us in the long run?

Large numbers of twenty-one species of our wild ducks migrate south of our country, some going even to Chile. Of the Plovers, Yellow-legs, Snipe, Curlews and other Shore-birds, the bulk of forty-five kinds breeding in Canada or the United States leave us for about six months. With the exception of the Wilson's Snipe, these species are protected at all times while with us, but virtually none of them receives the slightest protection in the West Indies or in any country south of the Rio Grande River.

This spring I found Blue-winged Teal in Puerto Rico being shot four months after the season for hunting them in the United States had closed, and about the same time found Shore-birds being killed in the Virgin Islands. On the other hand I witnessed in Puerto Rico in April of this year the passage of an up-to-date game law. By this action, Puerto Rico becomes the first island in the West Indies to enact such an effective law. It was largely brought about by the work and influence of that fine young Virginia ornithologist, J. Adger Smyth, at the present time connected with the Insular Department of Agriculture and Commerce.

The writer would be much pleased to communicate with any one who has made any observations regarding the undue killing of birds in various countries. Letters may be sent to the International Committee for Bird Preservation, Room 841, 1775 Broadway, New York City.

In concluding I may mention that this international work, which I have done what I could to foster, has of necessity cost some money for various expenses. To the present time the amount thus expended by our New York office has been something like \$35,000, the collection of which has been one of the writer's various duties.

A DECREASE IN THE PURPLE MARTINS

By Mayor Jerome B. Flora
Elizabeth City, N. C.

Through my observation and from contact with others interested in Martins, there has been, in the past year, a marked decrease in the number arriving in the spring. I have also been in conversation with a Purple Martin fan from Newbury, S. C., and he told me that this year one pair arrived in the spring where heretofore his boxes were filled. I asked him to what he attributed the shortage. He advised that he read in some farm paper or journal that this condition was general over the area occupied by these birds on their visit to North America and that the shortage was due to a poisonous spray that was being used by the Brazilian coffee growers. It seems that the Martins feed off of particular insects that were found over the coffee plantations, and a spray was used to protect the coffee from a disease. These insects absorbed this poison and the Martins in turn suffered fatal results. Until I learned this I was of the opinion that maybe the Martins, in their migration, had come in contact with the tropical storms, or hurricanes, that originate in or around the Gulf of Mexico.

In regards to the migration of these birds, I have noticed no particular difference in early migration of the adult bird or the young. I am at a loss to explain their early leaving this year from this vicinity. I noticed ten days later Martins in and around their boxes near Kill Devil Hill Life Saving Station on Dare County coast. However, every Martin in Elizabeth City left the week of July 20. I saw by the newspapers that the Martins began to gather in and around Beaufort around the middle of July.

If you wish to trace the poison theory that I mentioned, I refer you to Mr. Thomas O. Stewart, 905 Commercial National Bank Building, Charlotte, N. C.

Mr. Phillips Russell in his "Carolina Calendar", in the Raleigh NEWS AND OBSERVER has often quoted Mayor Flora on Purple Martins. We wrote him asking about the relative number of Martins this year as compared with past years, and the above is his reply. R. A. Urquhart of Lowiston, N. C., asked last spring if many others had noted a decrease in the number of Martins, as his boxes could house fifty-four couples and had only six.

Recently in "Carolina Calendar" someone challenged the statement of Mayor Flora that the Martins had left the section around Elizabeth City the week of July 20. They cited seeing Martins while at Manteo the week of August 20.

I also noticed a number of Martins in Currituck County and at Roanoke Island on August 20. While they were fairly numerous, they were all immature birds. The young birds are light on the breast and underparts like the adult female. The young males do not have the dark underparts like the adult male until the next molt. In all the birds I saw there was not one with dark underparts. This would eliminate the adult males from these birds, though it would not prove that there were none of the adult females, because of the similarity of coloring with these and the immature birds of both sexes. It is highly probable that all of the birds were immature ones that had migrated from farther north, and that all the North Carolina birds, both the adult and the young had already moved southward.

The week of August 23-28, 1937, the Martins were abundant on the south shore of Chesapeake Bay between Cape Henry and Ocean View. On Monday, the 23rd, I saw a flock of over a thousand perched on the light wires. They had been numerous that week before, but not as abundant as this. The flock increased all through the week until on Thursday they were over two thousand. On Friday, the 27th, they were not seen and less than a hundred were seen all day, and on the 28th I did not notice any. Of all this number, there was not one that was an adult male. Nor were any of them flying around the numerous Martin boxes that had been used by the birds all summer.

These observations would seem to indicate two things. First: the local Martins had already migrated and these birds were not the ones that had nested there this summer. Second: the adult birds migrated this summer before the immature birds. Now

what we would like to know is whether this is common or not. None of our bird books throw any light on the matter.

-----Editor

BREEDING HABITS OF THE LEAST TERN

By Mrs. Gertrude W. Page
Aberdeen, N. C.

On May 18, 1937, great numbers of Least Tern (Sterna antillarum antillarum) were seen laying their eggs on a low barren sandy point which is the north shore of New River Inlet, Onslow County, N. C. No doubt I should have said they were nesting but there was no smallest sign of a nest, not even a depression in the sand. When our party arrived we saw a great flock of these small tern swarming like bees all over the sand spit to a height of about thirty feet. On very close inspection we found hundreds of eggs carelessly laid on the sand; some were in pairs and in one case we saw three together. They were barely above high tide line and were as close as two to three feet apart, each valiantly guarded by an anxious bird that knew her own nest unerringly and ran off other bird intruders as well as human and animal. Our boat was anchored on the inland side of this sand spit for four days, by which time all the nests had two eggs and quite a number had three beautiful grey eggs larger than a robin's and covered with uneven brown spots so they took on the appearance of the tiny high lights and shadows of the sand itself. The birds kept up an incessant screaming from dawn until dusk and made many short restless flights. We noticed that they never rose directly from the eggs but ran off some little distance before taking wing, and returned to their nests in the same indirect way. During the heat of the day the birds were never on the eggs but when a shower came up they covered them at once.

On June 19, we returned to the sand spit and found the birds still there though not in such great numbers. Some of the eggs were much as we had left them, some had been washed away by unusually high tides, and many had hatched into the most amazing patches of down, marked exactly as the eggs had been, with small dark brown blotches. The parents guarded these very closely though made no actual attack on a human intruder who chanced to have a keen enough eye to discover the motionless downy youngster. We were on our knees examining one of these closely when suddenly it rose up on its big feet and ran like a deer, to squat invisibly ten or fifteen yards away.

Two weeks later we went back and found most of the birds gone though there were some not quite grown that could fly only a few yards but could and did outrun the wind. The parents seemed to be with these and did much to distract attention from the young.

It was all a most interesting bit of bird life to have witnessed although we were sorry that no one in our party had sufficient knowledge of birds and their habits to make intelligent observation of these beautiful tern.

A NEST OF THE RED-EYED VIREO

By Miss Grace Anderson
Statesville, N. C.

There hangs a nest between a Willow Oak's forked twig, made beautiful with ribaned paper, lichen and spider's web. On June 17, we turned our field glasses on quivering leaves high above and saw the Red-eyed Vireo sewing her nest, using the overhand stitch, until it swung exquisite, a tiny basket of weed stalks, grasses and inner barks of trees. She draped the whole in soft trim of white paper-lichens-web, smoothed and plucked them, approved the effect with head turnings to right and left, as any woman plucks and approves a frilly dress. Intermittently for three days we watched the builder quietly working, but when the finishing layer of hair was brought her joy burst into sweet twitterings. She is the architect while her mate is proficient as a longwinded, pleasant-voiced orator, or as a new-fangled musician. Is he talking, or is he singing?

The day her work was done, her mate, of the doubtful profession, rose to near the top of their tree and in his pleasantly-serious, monotonous voice proclaimed it good. He perched in one spot, publishing his happiness for eight minutes. There were moments when his voice fell to a half-still, whispering sweetness that we have heard when birds sing near their nests. The nest hangs thirty feet up, and three to five eggs will soon fill the cup-shaped home. Usually the nest is within ten feet of the ground in smaller trees but it is not unusual to find them as high as this.

The Red-eyed, most common of the Vireos, is a summer resident, but not abundant within Statesville. His song alone will identify him. He tells his beads over and over in the green light of the birds choir loft, from dawn to eve, from May to August. To us his manner of speaking, dashing and then a pause, recalls Dickens' "Mr. Jingle". Dickens' "Tony Weller" describes that individual's loquacity as: "The gift o' the gab very gallopin." It was Mr. Wilson Flagg who "Placed the Vireo among the clergy and gave him the name of 'Preacher Bird.' He takes the part of a deliberate orator who explains his subject in a few words, and then makes a pause for his hearers to reflect upon it. He seems to say: You see it, you know it, do you hear me? Do you believe it?"

Mr. F. S. Matthews says the Red-eyed "has something to say at all times and under all circumstances." We know of one time that did him honor. Last year's BIRD LORE reported the death of a bird-lover. The writer told of the funeral when beautiful appreciations were expressed for the man who had spent half a life time in working for bird preservation. As the last words were spoken at the grave a bird's voice carried on the service. It was a Red-eyed Vireo paying last respects.

THE PIED-BILLED GREBE CAN WALK

By C. S. Brimley and Miss Roxie Collie
Raleigh, N. C.

On August 7, 1908, a living adult specimen of this species was

brought to Mr. Brimley and he proceeded to test out its method of progression. He found that it would walk or stand upright with the tarsus and tibia held in an approximately vertical position either moving or stationary; neck also vertical.

Again, on August 18, 1933, another specimen was brought him alive, this time an immature specimen which had been caught and had its wing clipped to keep it from flying. This specimen would run in an upright position but always flopped down on its breast whenever it stopped moving. It was returned to the donor who released it on the nearest pond.

On March 23, 1935, an adult female Pied-billed Grebe was captured alive at the city water plant and donated to the State Museum. When the specimen was released on the floor of the workroom, it assumed an upright position, holding the tarsi and tibias nearly vertical and was capable of either walking or standing still.

FORSTER'S TERN AT ROCKY MOUNT

By Rev. Francis H. Craighill
Rocky Mount, N. C.

On August 27 a twelve-year old boy killed a strange bird on the City Lake with a boat paddle. Randolph Butler, one of our young naturalists among the Scouts identified it as a Forster's Tern (Sterna forsteri). I have inspected and checked it carefully and he is unquestionably correct. He has mounted the bird nicely and it is preserved for future inspection or use. This is the first inland record of this bird for North Carolina. It has been reported along the coast a few times. The only other records we have for the State are those in THE BIRDS OF NORTH CAROLINA (pg. 36-37). It was mentioned by Coues as a migrant and a winter resident at Fort Macon in 1871, and Bishop found it at Pea Island July 23-August 20, 1904. The only place at which it is known to nest on the Atlantic Coast is near Cobb's Island, Virginia, where Dr. J. J. Murray found some twenty pairs nesting in June this year (THE RAVEN Vol. VIII, No. 6 pg. 42). One reason for the lack of records for this bird is the fact that it is hard to distinguish from the Common Tern. The best way to distinguish them is said to be their notes, a rasping "za-aap" instead of the harsh "tee-arrrr" of the Common Tern.

CHARTER MEMBER

By mistake, MRS. ANDREW J. DAVIS, Henderson, N. C., was not included in the last list of Charter Members.

GOOD BOOKS ABOUT BIRDS

ADVENTURES IN BIRD PROTECTION, An Autobiography by Thomas Gilbert

Pearson. D. Appleton-Century Co., New York, 459 pages, \$3.50. This book has much in it about our N. C. birds. Dr. Pearson attended Guilford College because they traded him two years of college work for his collection of bird eggs. He then went to Chapel Hill, graduating in 1899. Then he taught at Guilford and at the Woman's College in Greensboro. In 1902 he helped found the N. C. Academy of Science and the Audubon Society of N. C. Through this latter group he induced the State Legislature to pass a law protecting song and insectivorous birds --the first Southern state to do this and to have game wardens. At times the book reads like a western thriller, for his adventures have included catching and prosecuting outlaws, game hogs and pot hunters. One chapter deals with the fight to abolish the trade in bird feathers sold for hat ornaments. In the New York Legislature the opponents of the bill said it would only protect birds of other countries and not our own birds which were not used as ornaments. Dr. Pearson presented a "Chanticleer Bow", offered for sale in a local store, which has on it the head of a skylark. Some of these birds had recently been breeding on Long Island. It is a good book for any library, and well worth reading for its North Carolina history, its information about birds and the life of an interesting man.

NEW BOOK OF BIRDS, National Geographic Society, Washington, D. C. 2 vols. 738 pages, 231 photographs, 17 migration maps, 204 full-page color plates by Major Allan Brooks. \$5.00 for the set. These two volumes are just off the press. They contain articles published recently in the GEOGRAPHIC by such authorities as Alexander Wetmore, T. Gilbert Pearson, Arthur A. Allen, Robert Cushman Murphy and Frederick C. Lincoln. Accurate information about more than 600 species of our birds, and colored pictures of 950 birds by one of our best ornithological artists.

WHAT TO LOOK FOR THIS FALL

So many of our members have written the Editor asking him how to study birds, and whether such and such information was important, that he offers these suggestions. Keep a list of the birds you see this fall and the dates on which you see them. Some of these birds you see are Permanent Residents of your community: they are with you all through the year. Of the 115 species of birds listed by C. S. Brimley as having been seen around Raleigh up to 1930, 46 are permanent residents. If you do not know which birds are permanent residents of your community, you can soon learn them by checking your list to see which birds you have seen every month.

The other birds on your list may be divided into four groups: Transients, or birds that have nested farther north and are passing through on their way to their winter home; Winter Visitors, that have nested farther north and will winter in your locality, leaving you in the Spring; Summer Visitors, who have nested locally and will leave this fall to spend the winter farther to the south; Stragglers who just happen to come into your community because of a storm or happen

to wander off their beaten course. The Forster's Tern at Rocky Mount would be classed there as a straggler, while along the coast it would be classed as a transient for that would be its natural course in migration.

The Transients: Since these birds will spend a few days or a few weeks with you, it will be interesting to note when you see them first, and also the last date on which you noticed them. You may not know which birds on your list are transients, so the ones seen at Raleigh are listed below according to the first dates on which Brimley noted them. Your list will not be identical of course, but this may serve as a check. It was too much trouble to give the departure dates for all, so only the month of arrival and the approximate order is given. In August: Barn Swallow, Bobolink, Chestnut-sided Warbler, Blue-winged Warbler, Sora, Osprey, Blackburnian Warbler, Veery and Baltimore Oriole. In September: Pigeon Hawk, Scarlet Tanager, Black-throated Green Warbler, Magnolia Warbler, Black-throated Blue Warbler, Long-billed Marsh Wren, Bicknell's Thrush, Blackpoll Warbler, House Wren, Olive-backed Thrush and Connecticut Warbler. In October: Gray-checked Thrush and Rusty Blackbird.

The Winter Visitors: The important date for these is the first time you see them. Next spring you will be interested in how late they stay with you, but just now it is when they arrive. They arrive in Raleigh as follows: In August: Piedbill Grebe and Marsh Hawk. In September: Cowbird, Redbreasted Nuthatch, Yellow Palm Warbler, Savannah Sparrow, Wilson's Snipe, Bewick's Wren, Winter Wren and Yellow-bellied Sapsucker. In October: White-throated Sparrow, Song Sparrow, Towhee, Ruby Kinglet, Brown Creeper, Golden-crowned Kinglet, Swamp Sparrow, Vesper Sparrow, Myrtle Warbler, Hermit Thrush, Pipit, Fox Sparrow, Junco, Purple Grackel, Purple Finch and Coot.

The Stragglers: No one can say which birds will fall in this class. Any of the more than 600 species in America may come to your locality. If you list a bird about which you are not sure, write THE CHAT and we will tell you what we know about it.

The important thing to the North Carolina Bird Club is that you send in to the CHAT your list, or rather a duplicate of your list. In this way you will add to the knowledge of the distribution of the birds over the state, and also help C. S. Brimley who has been sending migration records for the state to the Biological Survey for more than fifty years. So send in your list.

FIELD NOTES

Statesville: My Brown Thrasher returned 3/20, (3/21/36). The second nest was found the last of June, 9 feet up in a privet hedge. The young birds had hatched on July 4. The first bird left the nest on July 16. Red-eyed Vireo returned to yard 4/10 (4/30/36). The first nest was completed 6/19, 30 feet up in a Willow Oak. Young birds heard in nest 7/12. On the 17th first bird left nest--and parent birds did not feed it all day but brought much food to two others, one

in the nest and the other a few inches outside. Next day, 18th, the first bird to leave the nest was making short flights in the yard. The Red-eyed Vireo stopped singing in July, but with August there is an occasional song. The House Wren left the nesting box on 6/16, this was a first nest. The bird chorus has dwindled during July and August, with brief songs at dawn of the Cardinal, Carolina Wren, Dove and Wood Pewee. Never a day passes without the Pewee's song. Lately the Brown Thrasher sings more and the Yellow-throated Vireo is softly laughing as he runs a practical eye over the leaves. Also the Goldfinches and Maryland Yellowthroats are singing.

-----Grace Anderson

Pinebluff: A Red-eyed Vireo has been observed feeding a young bird during the latter part of August; the 25th is the last date observed. This is an unusually late date for young birds of this species. Mr. C. S. Brimley in his Raleigh Bird List (1930) gives June 17 as the latest date on which he found eggs of this Vireo.

-----Marion Neillo

Raleigh: In the summer of 1935 Mr. J. C. Allison of Raleigh noted a curious fact regarding a pair of bluebirds that nested in a bird box on his lot. They raised three broods, nothing extraordinary about that, but he did feel that he had run across a new phase of bird life when he found that the young birds of the second brood helped their parents in feeding the third brood of young. The third nest it may be stated was started while the parent birds were still feeding their second brood.

Miss Roxie Collie saw six tree swallows near Boone's Pond on June 20, which is the first summer record for North Carolina.

Nestling birds are full of troubles, not only are they usually bothered by the Northern Fowl Mite, which infests the nests and sucks the blood of its inmates, but there is a kind of blue-bottle fly which lays its eggs in birds' nests and the maggots suck the blood of the nestlings in the nest. C. S. Brimley bred about twenty of these flies from a phoebe's nest which Miss Collie had collected about a week previously. The flies emerged July 8 to 10, 1937.

-----C. S. Brimley

NAG'S HEAD AND ROANOKE ISLAND

June 6 - 11, 1937

The Cowbird seems to be an all year round resident on Roanoke Island. It was seen there and on Bodie Island last year the latter part of June, and again this year on June 8. A flock of 150 was seen in Manteo Feb. 25 and 26, Scout Executives Sigwald and Mozo sharing the observation. A Boy Scout of Wanchese reported killing a Cowbird on Feb. 13, wearing Biological Survey leg band No. 201,261. Ho and his companions seemed familiar with the birds and able to differentiate them from other blackbirds, and called them by the local name of "Lice eaters", presumably from their association with cattle. He thought

that they were present throughout the winter, which, this year, was mild.

The Black Duck is present at all seasons in this area and breeds in considerable numbers in a marsh in the interior of Bodie Island. Ospreys have a group of nests in plain sight from the highway near Manteo. Barn Swallows, Meadow Larks, Towhees, Seaside Sparrows and Boat-tailed Grackles were abundant. Two family groups of American Eagles were seen, and one group of two adults and two young were under observation for an hour. A dead Gannet and dead Loon were found on the beach, relics of some winter storm. Five Least Bitterns were seen in the salt Marsh on Bodie Island.

At the time of this visit, June 6 - 11, there were many left over winter birds. About twenty Red Breasted Mergansers were seen each day, all of them in female plumage. Other winter birds still present were the Least and Western Sandpipers, Greater Yellow Legs, Sanderling, Black Bellied and Semi-palmated Plovers and Ruddy Turnstone. Some of these birds were crippled, but most of them seemed in excellent health and spirits.

Bird high lights of other summer trips included finding Wilson's Petrel abundant on Chesapeake Bay and New York harbor; Black Ducks nesting in Delaware and New York; some of our winter birds and migrants in their summer homes on Long Island and in Connecticut; an albino Flicker at Frederick, Md., and abundant Juncos on Grandfather Mountain.

-----F. H. Craighall

Nag's Head: On August 3, while visiting at the cottage of William Joyner, I saw a nest of the Barn Swallow, located on the porch of the cottage. There were young in the nest. The adult bird would alight on the railing of the porch, within ten feet of the people who were sitting there. This is a very late date for young birds.

-----H. H. Brimley

Rocky Mount Region: A nest of the Red Shouldered Hawk was under observation during the month of May, and was visited by several interested bird lovers. It was in a pine tree, about forty feet from the ground, and contained only two nestlings. They were easily observed, grew very fast, and developed into handsome birds. One left the nest May 28, and the second on May 31, but both stayed around the nest until June 12.

Thousands of Purple Martins gather in Rocky Mount every summer, roosting in trees and preparing for the migration. A small band of about a dozen was first observed at the annual gathering place on May 8, and by May 31, had grown to several hundred; but the big flocks were not in evidence until early July. The biggest band numbers about 5,000, and there are several smaller groups. The big group left on the night of Aug. 13, (last year on Aug. 12) and others have gone since, but at the present writing, Aug. 24, there are still many remaining.

Chimney Swifts in Rocky Mount also leave their home chimneys

after the nesting season and gather in some large chimney. In recent years they have favored church chimneys for this purpose. They leave about the middle of October.

The Yellow Crowned Night Heron has again been the most numerous heron of this neighborhood during May and June. The first young birds were seen in company with their parents on June 23. It is confidently believed that there is a nesting place nearby, but it has not been located. These birds do not seem to be any more nocturnal in their habits than other herons, and are rather gentle and easily observed. The adults disappear in July about the time other varieties of herons arrive, but the young birds linger longer.

Three Snowy Egrets, unusual inland, visited "Beech Branch" in early August and remained about a week. The Louisiana Heron was seen in the same place last year.

Thirty Wood Ducks were seen in one flock on the "Old Town" marsh. Three of Rocky Mount's younger naturalists, of college freshman age, were present with an older observer. Two of these boys have interesting collections of mounted specimens, and one of them makes spirited and accurate bird drawings well worthy of reproduction. They are tireless rangers, and have made a number of additions, authenticated by collected specimens, to the bird list of the Rocky Mount area.

-----F. H. Grathill

Fayetteville: List of Birds' Nests Observed in 1936: April 19, Pine Warbler, nest with 4 eggs. April 1, Carolina Chickadee, flushed bird from nest did not open it. April 26, Carolina Chickadee, nest with 5 slightly incubated eggs. April 26, Cooper's Hawk, nest with 3 slightly incubated eggs. April 29, Louisiana Water Thrush, 2 nests with 4 and 5 fresh eggs. April 30, Louisiana Water Thrush, nest with 5 fresh eggs. May 3, Prairie Warbler, nest about half finished, both birds at work on it. May 17, Wood Thrush, nest with 4 eggs, in Moore County. May 17, Louisiana Water Thrush, nest and 5 young birds nearly ready to fly, Moore County. May 24, Killdeer, four young birds running about in cultivated field. May 24, Mockingbird, nest and 4 newly hatched young. May 24, Chipping Sparrow, nest with 4 eggs. May 24, Field Sparrow, nest and 4 eggs. May 31, Indigo Bunting, nest and 4 fresh eggs. May 31, Acadian Flycatcher, nest and 2 slightly incubated eggs. Note: All were found in Cumberland County except where otherwise noted.

-----Virgil Kelly



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The Chat

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BIRDS OF LAKE MATTAMUSKEET, NORTH CAROLINA

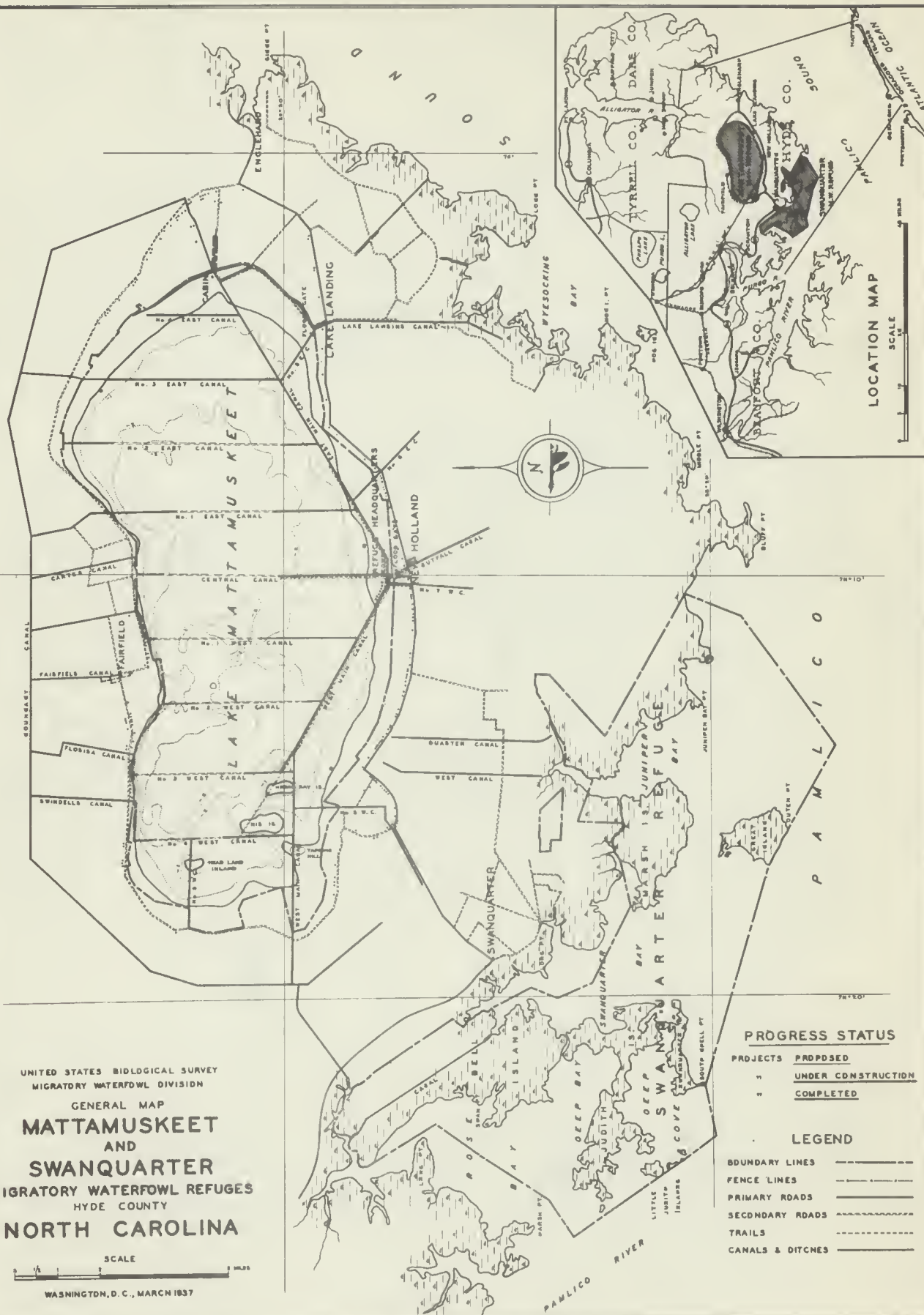
Earle R. Greene (1)
U. S. Biological Survey, Fargo, Georgia

Lake Mattamuskeet, a large, shallow fresh-water lake in Hyde county, N. C., is in the heart of an important Atlantic coast water-fowl wintering ground. The section has long been famous for its wintering geese and swans, which along with many species of ducks have suffered alarming reduction in numbers during recent years. The establishment, therefore, by the Federal Government of the Lake Mattamuskeet Wildlife Refuge as well as that of the Swanquarter Migratory Bird Refuge just south of it was a much needed conservation measure. The writer was stationed at Lake Mattamuskeet from October 1934 to December 1936, during which time one of his chief duties was to record the bird life of the refuge, especially the relative abundance and distribution of the water fowl. The following notes are taken from the daily journal of that work. They are not intended to be a complete catalogue of all the birds occurring in the region. Since much attention was given to the water birds, some of the land birds may have been neglected. It is hoped especially that the data on the water-fowl will be of value for comparison in future years.

(1) The author wishes to express his special appreciation to Eugene P. Odum of Chapel Hill, N. C., and the University of Illinois for suggesting that this work be published and for Mr. Odum's aid in helping to organize the data in the form here presented

UNITED STATES BIOLOGICAL SURVEY
MIGRATORY WATERFOWL DIVISION
GENERAL MAP
**MATTAMUSKEET
AND
SWANQUARTER**
MIGRATORY WATERFOWL REFUGES
HYDE COUNTY
NORTH CAROLINA

SCALE
0 1/4 1/2 3/4 1 MILE
WASHINGTON, D. C., MARCH 1937



PROGRESS STATUS

PROJECTS PROPOSED
 UNDER CONSTRUCTION
 COMPLETED

LEGEND

BOUNDARY LINES ————
FENCE LINES - - - - -
PRIMARY ROADS ————
SECONDARY ROADS - - - - -
TRAILS - - - - -
CANALS & DITCHES ————

History of the Area: Lake Mattamuskeet has had a most interesting history, having been completely drained at one time and then restored. Many years ago, with visions of building a "New Holland", a company was formed for the purpose of draining the lake and utilizing the rich black soil on its bottom as farm land. A glance at the accompanying map will show how this was done. A series of deep canals having a focal point on the south side of the lake, were constructed and the water was pumped out by means of large pumps. All in all, it was a tremendous undertaking since the water had to be continually pumped out because of the natural tendency of the area to fill up from drainage water from the surrounding country. Despite the fact that crops were raised on the land thus uncovered, the project was doomed to failure,; the expense of keeping the water out was too great. In december 1934 the Federal Government acquired the territory for a migratory waterfowl refuge. The lake was allowed to refill and to play host again to thousands of water-fowl. It is hoped that the experience with draining Lake Mattamuskeet will serve as an example to other ill-advised drainage projects. The refuge is not as yet a complete sanctuary as hunting is allowed on certain "lands" under the strict supervision of Federal and State wardens.

The Area as a Bird Habitat: Lake Mattamuskeet Wildlife Refuge contains about 50,000 acres, about 90 per cent of which is water. The lake is shallow, 2 to 3 feet being the average depth, although the canals are much deeper. A good percentage of the lake, especially near the shore, is choked with emergent and submerged vegetation. Edwin P. Cressor of the Biological Survey, who has made extensive studies of the plant life of the area, submits the following information: "The most important native plants in and about Lake Mattamuskeet, from the standpoint of value to the waterfowl, are the following: Three Edged Sedge, Scirpus americanus; Bullrush, Scirpus validus; Four Square Sedge, Eleocharis quadrangulata; Wire or Hair Sedge, Eleocharis prolifera; Smart Wood, Polygonum (two species); Arrow Leaf, Sagittaria (two species); Water Lily, Najas minor; Frogbit, Linnobium spongia. Many of these plants grow during the summer time on the moist lands which are flooded in the winter time by winds and by high water level, thus becoming available to water fowl. The greatest concentration of foods for waterfowl occurs on the eastern, southern and western ends of the lake's border. The open water in the lake proper is virtually a biological desert as far as food plants are concerned. The broad leafed duck potato, Sagittaria latifolia, has been introduced to this area and was greedily consumed by geese and swans. Cyperus esculentus has also been introduced and this native chufa has proven of considerable value as a duck food. Coontail, Myriophyllum, has been introduced without success. Several crops of cultivated plants have been planted to insure plenty of food for the waterfowl on the area. Of these, the soya beans are the most important although rice and oats have also been planted with considerable success."

The shallow water, the readily accessible feeding grounds and the marshes and stretches of open water for resting make the lake an ideal wintering ground for the "dabbling", or surface-feeding, ducks (subfamily Anatinæ), the geese (subfamily Anserine), and swans (subfamily Cygineæ), which have similar feeding habits. The area is not so well suited to the diving ducks (subfamily Nyrocinæ), such as scaups, canvasbacks, and redheads, or to the mergansers (subfamily Merginæ). These forms have been found to be absent, casual or uncommon. The same also applies to the grebes and loons, although a few seem to find the deeper canals to their liking. Although the surface feeding waterfowl are, in the winter at least, the most important

constituent, the herons (order Ciconiiformes) and the marsh birds (order Gruiformes) are prominent in the avifauna but because sandy shores and mud flats are limited, the number of shorebirds (suborder Limicolae) attracted is not so great.

The land part of the refuge, comprising perhaps 10 percent of the area, consists of the shore, the canal banks and a few island (see map). The shore is mostly low-lying and swampy, and the trees thereon are chiefly pines, black and sweet gums, cypresses, and willows. The banks of the former drainage canals have remained above water in many places and extend out into the lake like peninsulas; a thick growth of shrubs and trees now covers these banks, which makes them excellent places for both water birds and water-loving land birds.

All in all, the Lake Mattamuskeet Refuge is a rather specialized type of bird habitat. Not only is it primarily a water habitat, but also a special type of water habitat which attracts great numbers of certain species, and few or none of other species. The land-bird population is likewise somewhat specialized in that the water-loving forms predominate, and many species common in the surrounding country are only of casual occurrence in the refuge.

Comparative Abundance of Wintering Waterfowl. As the value of the lake as a Federal Refuge lies chiefly in its wintering waterfowl, an attempt was made during the winter of 1934-35 and also in that of 1935-36 to estimate the numbers of the principal species of waterfowl wintering in the area. In the following table, estimates are given of the numbers of the commonest of the regular winter residents based on actual counts, frequently by two or more persons. The difficulty of determining the numbers of waterfowl on a large lake where the birds are likely to be scattered over large areas and to be subject to considerable shifting is, of course, realized. It is believed, however, that the figures given are at least comparable and fairly representative of the winters concerned.

Estimates of Numbers of Waterfowl Wintering on Lake Mattamuskeet Wildlife Refuge During the Winters of 1934-35 and 1935-36 (1)

Species	Date	No. Persons Counting	Estimate from Count
Canada Goose	Jan. 21, 1935	2	15,000
	March 3, 1936	6	14,380
Whistling Swan	Dec. 9, 1934	4	6,500
	March 3, 1936	6	4,066
Pintail	Dec. 9, 1934	4	721
	Jan. 24, 1935	2	1,117
	Nov. 6, 1936	-	1,600
Black Duck	Dec. 9, 1934	4	743
	March 3, 1936	6	1,056
Greenwinged Teal	Dec. 9, 1934	2	1,040
Mallard	Dec. 9, 1934	4	378
	March 3, 1936	6	152
Baldpate	Jan. 21, 1935	2	95
	March 3, 1936	6	31

Total for Winter of 1934-35 - 24,373 birds

1935-36 - 21,285 birds

(1) The counts and close estimates of waterfowl made by members of the Biological Survey during January and February 1937 show a large increase in the number of birds on the lake over those for the previous two winters. This satisfactory result was probably caused by the continuous protection afforded the waterfowl on the area and by the extensive and continual planting of grain and other foods. as this paper deals only with the winters of 1934-35 and 1935-36, the 1937 counts are omitted.

Bird Banding. Bird banding was carried on to some extent, three traps being used; and during the winter of 1935-36 more than 500 ducks and a number of Canada geese were banded and released. This feature of the work was of educational value and of much interest to the people of the section and to visiting naturalists.

Local Names. Birds play a prominent part in the lives of the people as is well shown by the large number of species that have acquired "local names". The following list gives the local names that the writer found in common use by the natives in the vicinity of the refuge for some of the birds that occur there.

LOCAL NAMES OF BIRDS ABOUT LAKE MATAMUSKEET WILDLIFE REFUGE

- Cormorant (*Phalacrocorax auritus*) - Nigger goose
 Great Blue Heron (*Ardea herodias herodias*) - Johnny Wiggins
 Greater Snow Goose (*Chen hyperborea atlantica*) - White Brant
 Gadwall (*Chaulelasmus streperus*) - Gray Duck
 Baldpate (*Mareca americana*) - Widgeon
 Hooded Merganser (*Lophodytes cucullatus*) - Grapper Crown
 Black Vulture (*Coragyps atratus atratus*) - South Carolina Buzzard
 Sharp-shinned Hawk (*Accipiter velox velox*) - Sharpstriker and Blue Darter
 Southern Bald Eagle (*Haliaeetus leucocephalus leucocephalus*) - Immature bird known as Gray Eagle
 Sparrow Hawk (*Falco sparverius sparverius*) - Brownie
 American Coot (*Fulica americana americana*) - Blue Peter, Blue Peter Duck
 Yellow-legs (*Totanus melanoleucus* and *T. flavipes*) - Yellow shank
 Yellow-billed Cuckoo (*Coccyzus americanus americanus*) - Rain Crow
 Nighthawk (*Chordeiles minor minor*) - (*C. m. chapmani*) - Bull Bat
 Flicker (*Colaptes auratus*) - Checker, by some of the old folks
 Eastern Kingbird (*Tyrannus tyrannus*) - Bee Martin
 Crested Flycatcher (*Myiarchus cinerascens*) - Daybreak
 Phoebe (*Sayornis phoebe*) - Witch bird
 Starling (*Sturnus vulgaris vulgaris*) - Hog bird
 Bobolink (*Dolichonyx oryzivorus*) - Rice bird. Cottontails in spring plumage of male
 Orchard Oriole (*Icterus spurius*) - English Mockingbird or English Robin
 Purple Grackle (*Quiscalus quiscula quiscula*) or Bronzed Grackle (*Q. q. lenis*)
 - Jackdaw
 Eastern Purple Finch (*Carpodacus purpureus purpureus*) - Twecker
 Eastern Goldfinch (*Spinus tristis tristis*) - Twehee
 Red-eyed towhee (*Pipilo erythrophthalmus erythrophthalmus*) - Joe whet
 Fox sparrow (*Passerella iliaca iliaca*) - Chuck (possibly confused by natives with Hermit Thrush note)

The annotated list herein recorded contains approximately 170 species. The nomenclature used is that of the 4th (1931) edition of the A. O. U. Check-list. Among the rarer species mentioned, the record of the occurrence of the Arkansas kingbird constitutes the first for the state; and the white-fronted goose has been previously recorded only once; and the snow bunting but twice. These unusual records as well as many other data from the refuge have been published in The Auk and Lake-Lore (see Bibliography).

Common Loon. Gavia immer immer. The common loon was noted but once, a bird being seen in flight above the lake November 28, 1934.

Red-throated Loon. Gavia stellata. On February 18, 1936, a red-throated loon was observed in the canal close to the entrance bridge inside the refuge. It appeared to be injured or oil-soaked and could not dive and swim just below the surface, but could not fly.

Horned Grebe. Colymbus auritus. Scarce. One observed, February 19, 1936, in Rose Bay Canal by the highway; on February 28, ten days later, one was seen in the outfall canal between the highway and the refuge.

Pied-billed Grebe. Podilymbus podiceps podiceps. Found in small numbers, mainly in the canals, throughout the winter.

White Pelican. Pelecanus erythrorhynchos. On June 16, 1935, a white pelican was seen soaring over the New Holland Inn and then coming down towards the Lake; it was observed for several minutes with 8-power glasses. As definite records of this species are very few in the state, and in the eastern states in general, it was a welcome sight in the refuge.

Double-crested Cormorant. Phalacrocorax auritus auritus.

Florida Cormorant. Phalacrocorax auritus floridanus. Scarce. A crippled bird of one or the other of these forms was observed in the outfall canal on April 27, 1935. On May 12, 1936, another bird, and on September 9, 1936, two, probably floridanus, were observed in the western part of the refuge.

Water-turkey. Anhinga anhinga. Scarce; one observed on September 4, 1936, by W. G. Cochran and the writer near the outfall canal, about 1 mile south of New Holland Post Office.

Great Blue Heron. Ardea Herodias herodias. Common permanent resident. The wintering population was estimated to be 40 or more in 1934-35.

American Egret. Casmerodius albus egretta. Common summer resident; usually tame and easily approached. A few of these birds were seen in October and November 1934, and one was observed January 3 and 7, 1935, near the foot of the Clubhouse road at the lake.

Snowy Egret. Egretta thula thula. The snowy egret is apparently of rare occurrence on the lake; five birds were observed September 28, 1936, at the lake landing-refuge boundary line.

Louisiana Heron. Hydranassa tricolor ruficollis. Uncommon; a few birds recorded during the summer.

Little Blue Heron. Florida caerules caerules. Common summer resident; many birds in the white immature plumage seen. In 1934, single immature birds were observed as late as October 16 and November 20.

Eastern Green Heron. Buteo virescens virescens. Common summer resident.

Black-crowned Night Heron. Nycticorax nycticorax hoastli. Fairly common throughout the year in certain parts of the refuge. Occurs in winter especially along the west main canal bank, the birds appearing to be mostly immatures.

Yellow-crowned Night Heron. Nyctanassa violacea violacea. Scarce. On May 12, 1936, two adult birds were noted along No. 4 West Canal.

American Bittern. Botaurus lentiginosus. Winter resident, most common during spring migration, the latest date the species has been seen being May 7.¹⁹³⁵ Although a possible breeder, many hours of searching failed to discover any birds after the above date.

Eastern Least Bittern. Irola exilis exilis. Common summer resident in certain sections of the refuge; earliest date of arrival, May 8, 1935.

Whistling Swan. Cygnus columbianus. This magnificent bird winters in abundance on Lake Mattamuskeet, this area being considered one of its chief wintering grounds in the eastern states. The notes of these birds can be heard during the night as well as throughout the day. Frequently, adult birds with three or four in immature plumage are seen close together, presumably representing family groups. There is no finer sight in the bird world than a flock of several hundred of these swans bound for a choice feeding ground, their long necks outstretched and their white plumage shining in the sunlight. They arrive on the lake during the latter part of October and begin to leave for the north the latter part of February; by the first of March, their numbers are noticeably fewer, and only a few individuals can be found by April 1. In April 1935, six were observed May 8, and 14 and June 2 on the Fairfield side, and scattered birds were seen in July by other parties. It is believed that some of these were cripples and that others were perhaps unwilling to leave them; family ties are strong with this species. No evidence of breeding.

Common Canada Goose. Branta canadensis canadensis. Abundant winter resident. For many years this section has been famous for its wild geese. As the count shows (see page 47), this is the most abundant species of waterfowl on the lake. The geese arrive from the north about the middle of October and begin to depart in February. Small flocks linger into April, and a few birds remain during the summer, probably cripples and non-breeders, as there is no evidence of breeding. In 1935, 11 birds were noted on June 14, 18 on August 14 and 16 on September 19.

American Brant. Branta bernicla nigra. Apparently rare; one bird was recorded on January 9 and three on January 22, 1935.

White-fronted Goose. Anser albifrons albifrons. Willie Gray Cahoon and Harley Lawrence, of the Lake Mattamuskeet Wildlife Refuge, identified a goose, shot by a hunter December 5, 1936, on the hunting area, as belonging to this species. The writer was away at the time and did not see the specimen. Fourth record for the state.

Greater Snow Goose. Chen hyperborea atlantica. Not seen during the 1934-35 winter season; November 27, three birds flew up with a flock of Canada geese; December 4, two birds seen over East Main Canal; January 21, one bird flying over the water with Canada Geese; and March 17, one bird seen by W. G. Cahoon and J. P. Hodges flying over the New Holland Inn.

Blue Goose. Chen caerulescens. Rare along the Atlantic seaboard; the following records for 1934-35 are of interest: October 30, one bird flying with a flock of Whistling Swans; November 9, six birds observed by James Silver and Joe Mann; November 20, seven birds seen in one flock, apparently all in adult plumage. January 9,



Whistling Swans over Lake Mattamuskeet



Canada Geese, Whistling Swans, and Ducks, off Lake Landing Canal Road.
November 1936

The bird flying with whistling swans; March 13, two birds seen by Mrs. Wm. F. Atkinson, of New York, on the lake in front of New Holland Inn.

Common Mallard. Anas platyrhynchos platyrhynchos. Common winter resident, generally occurring in small flocks, couples, or individual birds; a few remain during the summer. A nest containing 5 eggs was found on June 23, 1935, near the outfall canal. The next day, the female was on the nest, but on the 27th, only three eggs remained and the nest was deserted. At another time, about 9 young and an adult were seen in the outfall canal by Mr. Wheeler of Redington CCC Camp; it is believed that these were wild birds.

Red-legged Black Duck. Anas rubripes rubripes.

Common Black Duck. Anas rubripes tristis. Common winter resident, a few (*tristis*) remaining during the summer. The black duck is probably the best known duck on the lake, although not the most abundant; usually occurs in singles, twos or small flocks. Two nests with eggs were found during the spring of 1936 and studies of them made by Willie Gray Cahoon and the writer. Rubripes predominates in winter, although the relative status of each is not known.

Gadwall. Chaulelasmus streperus. Scarce. On October 24, 1934, two birds seen; December 9, 1934, two were seen by Wm. L. Birsch and Joe Mann. Owing to its rather drab plumage, the species may have been overlooked to some extent and may be more common than is thought to be the case.

Baldpate. Mareca americana. Fairly common in winter resident; generally seen in small flocks.

American Pintail. Dafila acuta tzitzikoa. Common winter resident; the "sprig" arrives before the middle of October and gradually increases in abundance. During February 1935, it was the most abundant duck on the lake (see counts page 47). They are often tame and easily approached. In 1935, five birds were seen on September 11, and J. S. Mann reported four near Fairfield, September 8.

Greenwinged Teal. Nettion carolinense. Common winter resident. Shy, swift, and hard to hit; a few are taken by sportsmen of this section.

Bluewinged Teal. Querquedula discors. Mostly transient, November-December and March-April. Entirely absent January-February 1935. Latest date April 27, 1935.

Cinnamon Teal. Querquedula cyanoptera. J. B. Hodges, a native and for many years a guide of this section, reports that on February 5, 1935, he saw one of these birds near the shore on the west end of the lake.

Shoveler. Spatula clypeata. Winter visitor; cannot be classed as common at any time; its numbers increased during March.

Wood Duck. Aix sponsa. Common summer resident and transient, March 2 to November 22. Forty three birds were counted on June 9, 1935. On August 3 and 6, 1935, young were seen by Bruce Hodges and the writer. During the fall of 1934, it was abundant. Not recorded in winter by the writer. Usually frequents canals and the more wooded marshes, although at times it is found out on the open water.

Redhead. Nyroca americana. One record. On December 11, 1935, a male was taken by Ira N. Gabrielson in the hunting area.

Ring-necked Duck. Nyroca collaris. A winter visitor; although not considered a common bird, there are scattered records of its occurrence. 1050 of these ducks counted by Mr. Birsch and Mr. Mann on December 9, 1934.

Canvasback. Nyroca valisineria. Scarce winter visitor; one bird seen November 21, 1934 and 22 were counted by Mr. Birsch and Mr. Mann on December 9, 1934.

Lesser Scaup Duck. Nyroca affinis. Scarce winter visitor; one small flock of seven birds seen on October 30, 1934; a common duck on nearby bays.

American Goldeneye. Glaucinetta clangula americana. One record, 15 birds seen December 9, 1934 by James Silver.

White-winged Scoter. Melanitta deglandi. One record of three birds seen on December 9, 1934 by Mr. Birsch and Mr. Mann.

Ruddy Duck. Ereismatura jamaicensis rubida. Few records; one bird seen October 28, 1934; three, December 25, 1934; one, January 9, 1935; five, October 22, 1935 and one October 28, 1936.

Hooded Merganser. Lophodytes cucullatus. Scarce. Two birds, a male and a female observed in the east main canal, January 25, 1935.

Turkey Vulture. Cathartes aura septentrionalis. Common permanent resident about the lake and in the surrounding country.

Black Vulture. Coragyps atratus atratus. Permanent resident; possibly not so common as the turkey vulture, although at times a number may be seen.

Sharp-shinned Hawk. Accipiter velox velox. A few seen about the canal banks during the winter.

Cooper's Hawk. Accipiter cooperi. Probably resident; less common than the sharp-shinned in winter.

Eastern Red-tailed Hawk. Buteo borealis borealis. Several records during winter.

Northern Red-shouldered Hawk. Buteo lineatus lineatus. Permanent resident; seen in summer over Great Island at the western end of the refuge. Winters to some extent about the lake area.

Broad-winged Hawk. Buteo platypterus platypterus. On November 13, 1934, one bird was seen near Fairfield; it was tame and fearless. Apparently does not winter here.

American Rough-legged Hawk. Buteo lagopus sancti-johannis. On December 18, 1935, Willie Gray Cahoon and I watched one of these hawks near east main canal and the lake. It was in the dark phase. Its flight was somewhat like that of a bald eagle. When in the top of a small tree it was attacked by a marsh hawk; then it was chased along the lake by two crows and apparently put up no fight but flew deliberately along. Its markings were distinct and could readily be seen with the naked eye as well as through 8-power glasses.

Southern bald Eagle. Haliaeetus leucocephalus leucocephalus. A common permanent resident. Immature birds are known as "gray eagles" by the natives.

Marsh Hawk. Circus hudsonius. A common winter resident. Recorded as early as September 2 and 15, 1935.

Osprey. Pandion haliaetus carolinensis. Common in fall and spring, and several observed during the summer, March 24 to November 20. A nest was built in 1935 about 60 feet up in a dead cypress tree, near outfall canal, about one-fourth mile south of the New Holland Post Office. It was apparently blown down by a high wind during the night of April 15.

Duck Hawk. Falco peregrinus anatum. One record; one January 9, 1935, J. B. Hodges and I saw one distinctly flying over the Refuge and agreed on its identity.

Eastern Pigeon Hawk. Falco columbarius columbarius. One record; December 25, 1935, seen inside the Refuge by the canal bank.

Eastern Sparrow Hawk. Falco sparverius sparverius. Common during the winter; none seen during the summer. Seen on September 21, 23 and 24, 1935.

Eastern Bob-white. Colinus virginianus virginianus. A permanent resident; coveys may be seen in the dryer fields and woods surrounding the lake. More common within the refuge when the water level of the lake is lower and the canal banks are dryer. An adult and about 15 young were seen on July 19, 1935, along the east main canal road.

King Rail. Rallus elegans elegans. Summer resident. March 24, 1935 earliest record; not recorded in winter.

Virginia Rail. Rallus limicola limicola. Probably a rare breeder here. I have only one record, that of a bird seen on July 2, 1935, in the marsh between the east main canal and the refuge shore.

Sora. Porzana carolina. Transient; few records. On April 8, 1935, a sora was closely watched on the west main canal bank as it flew up on fluttering wings from a bushy place and alighted about 15 feet up in a bush where it remained several minutes. On April 20, 1935, one was within 30 feet of an automobile just off the road in front of the New Holland Inn.



Canada Geese and Ducks at feeding ground just east of Central Canal
January 1936



Canada Geese rising from feeding ground by Central Canal, January 1936

Florida Gallinule. Gallinula chloropus cachinnans. Probably permanent; recorded in April about the New Holland Inn, where they were easy to approach; on May 13, 1935, June 9, October 12 and 16, and January 7, 1935.

American Coot. Fulica americana americana. Common throughout the winter and at times very tame. In a yard by the lake at Fairfield, 33 coots were counted, almost as tame as chickens. This was in March when they seem to seek the shore and banks in preference to staying in the water. Generally they are averse to leaving the water and pitter along for some distance before finally taking wing. The last coot seen by me was on May 21, 1935; however, E. P. Grauser reports seeing some during August. There is a possibility that a few birds may breed here, although so far no nest or young have been found.

Semipalmated Plover. Charadrius semipalmatus. Transient. One bird was seen in the refuge on a mud flat at No. 2 east canal near the east main canal on May 18.

Wilson's Plover. Pagolla wilsonia wilsonia. Casual. On September 15, 1935 one bird was seen on the sand in front of the New Holland Inn.

Killdeer. Oxyechus vociferus vociferus. Small flocks seen feeding about the fields along the roads and highways during the winter. Seen only once during the summer, flying over the lake.

Black-bellied Plover. Squatarola squatarola. Casual. On May 17, 1935, two birds were noted in and about the marsh between the central canal and the goose trap.

Ruddy Turnstone. Arenaria interpres morinella. Casual. One individual by No. 2 east canal bank on May 21, 1935.

American Woodcock. Philohela minor. Few records. On December 25, 1934, two birds were flushed in a damp place near the refuge. On June 27, 1935, one bird was flushed near the Rose Canal (No. 6 East) inside the refuge. It is probably more common than the records indicate and probably breeds.

Wilson's Snipe. Gallinago delicata. Common winter resident, abundant in certain sections, such as a damp field near Fairfield. About the New Holland Inn, they were very tame, feeding within a few feet of the building. The latest date of occurrence in the spring was April 24, 1935.

Spotted Sandpiper. Actitis macularia. Transient and probable breeder. First seen on April 17, 1935; common during May and several seen during July, August and September, 1935.

Eastern Solitary Sandpiper. Tringa solitaria solitaria. Transient. Noted on August 21, 1935 near the old warehouse at New Holland inside the refuge and on August 27, 1935 on the old railroad bed near No. 4 west canal.

Greater Yellowlegs. Totanus melanoleucus. Transient; March 11 - June 1 and November 15. During April 1935, they were common in several parts of the refuge and became quite tame about the New Holland Inn, where they were easily approached.

Lesser Yellowlegs. Totanus flavipes. Transient. November 13, 1934; February 28, March 2 (same bird), and April 19, 1935.

Least Sandpiper. Pisobia minutilla. Transient, casual. On May 18, 1935 one bird was seen on the mud flat at No. 2 east canal and the east main canal.

Semipalmated Sandpiper. Ereunetes pusillus. Transient; casual. On May 18, 1935, two birds were seen on the mud flat at No. 2 east canal and the east main canal. At times they appeared to engage in quite lively fighting.

Herring Gull. Larus argentatus smithsonianus. Seen at times about the canals and the lake (fall to spring). On February 15, a splendid view was had of a herring gull near the center of the lake. 1935

Ring-billed Gull. Larus delawarensis. A more or less casual visitor; has been recorded over the lake as well as about the outfall canal.

Least Tern. Sterna antillarum antillarum. Casual. On July 24, 1935 about 10 birds were seen by the east main canal and on August 14, 1935 about 20 birds were noted near the same locality.

Black Tern. Chlidonias nigra aurinamensis. Transient. On August 14, 1935, three birds were seen over the lake between No. 3 and No. 4 east canals. During September they were abundant over the marsh inside the refuge as well as over the fields along the highways.

Eastern Mourning Dove. Zenaidura macroura gambelii. A common permanent resident along the canal banks.

Yellow-billed Cuckoo. Coccyzus americanus americanus. A common summer resident along the canal banks and in the territory bordering the refuge.

Southern Screech Owl. Otus asio asio. A permanent resident. Heard frequently at night above the New Holland Inn.

Eastern Nighthawk. Chordeiles minor minor.

Florida Nighthawk. Chordeiles minor chapmani. Uncommon. On May 10, 1935 one bird was seen almost over the New Holland Inn; on June 23, two birds were observed over a field between Swindell's Fork and Swanquarter; on July 18, two were seen over the central canal about one-half mile north of the Inn; on August 20, two were recorded in front of the Inn. The breeding form has not been definitely determined.

Chimney Swift. Chaetura pelagica. Summer resident, commonly seen over parts of the refuge and about Swanquarter a few miles away.

Ruby-throated Hummingbird. Archilochus colubris. Common summer resident.

Eastern Belted Kingfisher. Megasceryle alcyon alcyon. Common resident; frequents the canals. More common in winter.

Northern Flicker. Colaptes auratus luteus.

Southern Flicker. Colaptes auratus auratus. Common resident, especially along the canal banks, most numerous in winter. Auratus is probably the breeding form.

Southern Pileated Woodpecker. Geophicent pileatus pileatus. A permanent resident; fairly common in the more wooded sections near the lake. One bird was seen on the metal tower at headquarters.

Red-bellied Woodpecker. Centurus carolinus. Permanent resident; fairly common.

Red-headed Woodpecker. Melanerpes erythrocephalus. Not until May 3, 1935 did I find this species, and then four birds were seen near the highway between Hodges Fork and Fairfield, where they seem to be locally common.

Yellow-bellied Sapsucker. Sphyrapicus varius varius. A fairly common winter resident; several seen close to the New Holland Inn.

Southern Hairy Woodpecker. Dryobates villosus auduboni. A common permanent resident in wooded areas.

Southern Downy Woodpecker. Dryobates pubescens pubescens. A common permanent resident in wooded areas, and more approachable than the hairy.

Red-cockaded Woodpecker. Dryobates borealis. Scarce on the refuge. On September 17, 1935, two birds were observed near Rose Bay, between that highway and the lake highway, about four miles from the lake.

Eastern Kingbird. Tyrannus tyrannus. One of the most abundant summer birds about the lake. Four nests were noted along the east main canal between the central canal and No. 2 east canal on June 27, 1935.

Arkansas Kingbird. Tyrannus verticalis. This western species was carefully watched and recorded on October 1, 1935. One bird was on a wire and about the tops of nearby trees by the highway just west of the New Holland Post Office, a short distance from the refuge. Associating with it was an Eastern Kingbird and the many differences between the two could be plainly noted. First State record.

Northern Crested Flycatcher. Myiarchus crinitus boreus. Abundant summer resident. Its loud notes heard constantly in April and May. It is known as "daybreak",³⁵ by the natives and is well named. A nest in a mail box by the highway on May 30 contained 5 eggs and the customary cast-off snake skin. An unusual nesting site was the inside of a 3-inch pipe that hung over a temporary track about 25 feet from the entrance to the pumping plant. On June 16³⁵ it contained 5 young. The adults appeared unafraid and fed the young while numbers of workers were constantly moving about them.

Eastern Phoebe. Sayornis phoebe. Common winter resident, especially along the canal banks. Seen September 25, 1935 but not recorded in summer.

Acadian Flycatcher. Empidonax virescens. Summer resident, fairly common in some sections.

Eastern Wood Pewee. Myiochanes virens. Summer resident, fairly common, especially near the highway.

Northern Horned Lark. Otocoris alpestris alpestris. On January 31, 1936, a number of these birds were seen on and along the highway near New Holland. One picked up dead on the highway near the lake was examined, measured and determined to be the sub-species indicated.

Tree Swallow. Iridoprocne bicolor. Common winter resident, August 18 to May 14. Abundant during migrations (April and September).

Bank Swallow. Piparia riparis riparis. On July 28, 1935, a bank swallow, with a number of purple martins, was seen on a wire near the New Holland Inn.

Rough-winged Swallow. Stelgidopteryx ruficollis serripennis. A fairly common resident in summer. A nesting hole in the bank of the central canal near the Inn was occupied by a pair on April 15, 1935.

Barn Swallow. Hirundo erythrogaster. Common transient, April to May and in August. No evidence of breeding.

Purple Martin. Progne subis subis. Summer resident. Abundant in April. Nests in martin box in front of the Inn.

Crow. Corvus brachyrhynchos. Permanent resident; may be seen almost any day about the refuge, is one of the few harmful species here. Kingbirds, martins, redwings and grackles center their attacks on it, but it seems to thrive in spite of them.

Fish Crow. Corvus ossifragus. Common permanent resident. Difficult to determine in the field from the common crow unless heard cawing. Their voices are quite different.

Carolina Chickadee. Parus carolinensis carolinensis. Permanent resident; frequents the trees and shrubbery of certain dryer areas.

Tufted titmouse. Basileonax bicolor. Permanent resident.

White-breasted Nuthatch. Sitta carolinensis carolinensis. Scarce. One seen and heard in a tree on the Looker Lane, between the highway and the refuge, on January 3, 1936.

Brown-headed Nuthatch. Sitta pusilla pusilla. Permanent resident; probably nests on the islands in the lake or about the border of the refuge.

Eastern House Wren. Troglodytes aedon aedon. Seen a few times during winter.

Carolina Wren. Thryothorus ludovicianus ludovicianus. Common permanent resident.

Worm-eating Warbler. Telmatopterus palustris griseus. On July 28, 1935, I heard two birds and had a fleeting glimpse of one of them in the marshy growth along the lake by the east main canal road. Their gurgling notes were distinctive.

Long-billed Marsh Wren. Telmatopterus palustris palustris. Winter visitor: it probably winters here more abundantly than my records indicate. I have seen only a few of the birds along the lake marshes.

Eastern Mockingbird. Mimus polyglottus polyglottus. Common permanent resident. Several nests found.

Catbird. Dumetella carolinensis. An abundant summer resident, a few wintering. One of the birds about the Inn was the finest songster of this species I have ever heard, equalling many mockingbirds in the range and variety of notes.

Brown Thrasher. Toxostoma rufum. A permanent resident, fairly common during winter and common during summer. Several nests were examined.

Eastern Robin. Turdus migratorius migratorius.

Southern Robin. Turdus migratorius achrosterus. During December and January, Robins were abundant in the fields and woods surrounding the lake. I believe both forms winter in this section. Nests only sparingly.

Wood Thrush. Hylocichla mustelina. Summer resident; not common in this particular area; may be heard in certain wooded tracts.

Eastern Hermit Thrush. Hylocichla guttata faxoni. Winter resident; likes thick growth of small trees.

Eastern Bluebird. Sialia sialis sialis. Permanent resident; rarely seen on refuge. Commonly seen on telephone wires along the highway near the refuge.

Blue-gray Gnatcatcher. Polioptila caerulea caerulea. Scarce. On July 26, 1935, one was seen inside the refuge by No. 4 west canal near Fairfield. May breed in refuge.

Eastern Gold-crowned Kinglet. Regulus satrapa satrapa. Fairly common winter resident.

Eastern Ruby-crowned Kinglet. Corthylio calendula calendula. Common winter resident; more numerous than the golden-crowned.

American Pipit. Anthus spinoletta rubescens. Winter visitor, seen about the New Holland Inn as well as along the roadside skirting the refuge area.

Cedar Waxwing. Bombycilla cedrorum. During February, flocks of 60 to 70 birds were noted in the trees about the New Holland Inn.

Loggerhead Shrike. Lanius ludovicianus ludovicianus. Scarce. One bird, probably this form was seen inside the refuge along the east main canal roadway on November 27, 1935. On August 25, 1936, one bird was seen on a pine and bushes near my residence on the refuge. It is more common in the counties west of Hyde.

Sterling. Sturnus vulgaris vulgaris. Common permanent resident about habitations. The water tower is a favorite roost during the winter, and also serves as a nesting site in summer.

White-eyed Vireo. Vireo griseus griseus. Common summer resident; frequents thickets along the canals and on the islands in the refuge.

Red-eyed Vireo. Vireo olivaceus. Fairly common summer resident.

Prothonotary Warbler. Protonotaria citrea. The most abundant summer warbler in and about the refuge. An unusual nesting site was an old peach can about twelve feet above the floor of the pumping plant. On June 20, 1936, it was removed to a window ledge and found to contain 4 eggs. During the occupancy of the nest, the work of removing heavy machinery was carried on almost daily, but in spite of this three young hatched, only one of them, however, getting safely out of the building, the oil on the floor proving fatal to the other two.

Northern Parula Warbler. Compsothlypis americana pusilla.

Southern Parula Warbler. Compsothlypis americana americana. Scarce within the refuge; recorded in September, October and April, 1935.

Eastern Yellow Warbler. Dendroica aestiva aestiva. Scarce, noted April 29 and September 20, 1935.

Black-throated Blue Warbler. Dendroica caerulescens caerulescens. Transient; casual. Seen October 13, 1935.

Myrtle Warbler. Dendroica coronata. Common winter resident; at times very abundant about the Inn at New Holland.

Black-throated Green Warbler. Dendroica virens virens.

Wayne's Warbler. Dendroica virens waynei. Scarce; seen May 14 and Sept. 29, 1935.

Yellow-throated Warbler. Dendroica dominica dominica. Scarce on the refuge; on August 22, 1935, one bird was observed in the Pinyon Shoals section between the highway and the refuge.

Black-poll Warbler. Dendroica striata. Transient, casual. Noted May 14, 1935.

Northern Pine Warbler. Dendroica pinus pinus. Permanent resident; fairly common in the pine woods bordering the refuge.

Northern Prairie Warbler. Dendroica discolor discolor. Summer resident. Next to the prothonotary, it is the most abundant of the warblers.

Western Palm Warbler. Dendroica palmarum palmarum. Transient and winter visitor. October 12, 1934; November 13, 1934; September 30, 1935 and March 2, 1935.

Yellow Palm Warbler. Dendroica palmarum hypochrysea. On January 21, 1936, a yellow palm (hypochrysea) was positively identified.

Northern Yellow-throat. Geothlypis trichas brachidactyla.

Maryland Yellow-throat. Geothlypis trichas trichas.

Florida Yellow-throat. Geothlypis trichas ignota. The yellow-throat is a common resident; frequents the canal banks. Trichas is probably the breeding form although ignota may also be present. brachidactyla probably occurs during migration.

Yellow-breasted Chat. Icteria virens virens. Casual. On June 14, 1935, Carter Whittaker of Atlanta, Georgia, and I distinctly heard two of these birds calling in the thick brush along the highway between Fairfield and Hodges' Fork.

Hooded Warbler. Wilsonia citrina. Summer resident in a few choice damp woody places.

American Redstart. Setophaga ruticilla. Common transient. No breeding records here.

English Sparrow. Passer domesticus domesticus. A common permanent resident, many pairs nesting about the eaves of the New Holland Inn.

, Bobolink. Dolichonyx oryzivorus. Common transient, especially abundant in September.

Eastern Meadowlark. Sturnella magna magna.

Southern Meadowlark. Sturnella magna argutula. Common permanent resident in many places on the refuge, about the New Holland Inn and on the canal banks, and in the fields surrounding the lake area.

Eastern Red-wing. Agelaius phoeniceus phoeniceus. Permanent resident; one of the most abundant winter birds in the refuge; and also breeds abundantly.

Orchard Oriole. Icterus spurius. Common summer resident; a characteristic summer bird of this region. A number of nests have been recorded. Earliest date April 23, 1935, not seen after August 1.

Purple Grackle. Quiscalus quiscula quiscula.

Bronzed Grackle. Quiscalus quiscula aeneus. Common resident, especially numerous in March. The Florida form (aglaeus) may occur also.

Eastern Cowbird. Molothrus ater ater. Scarce. On January 26, 1935, about 66 of these birds were observed by the highway between Barber Shanty and the lake landing near the refuge.

Eastern Cardinal. Richmondia cardinalis cardinalis. Common permanent resident.

Indigo Bunting. Passerina cyanea. Scarce; recorded in May and June.

Eastern Purple Finch. Corpodacus purpureus purpureus. Winter visitor. On January 30, 1936, eight birds, males and females, were seen near the New Holland Inn. In February also, these finches were frequently seen near the Inn. On April 19, 1936 four birds were seen just outside the eastern end of the refuge.

Eastern Goldfinch. Spinus tristis tristis. Scarce. The only record is that of two birds seen a few feet outside the eastern end of the refuge on December 10, 1935.

Red-eyed towhee. Pipilo erythrophthalmus erythrophthalmus. Common permanent resident. Less numerous as a breeding bird. May 18, 1935, a pair with young were observed; both adults had red eyes.

Eastern Savannah Sparrow. Passerculus sandwichensis savanna. Winter resident; probably the most abundant sparrow along the edge of the marshes.

Eastern Henslow's Sparrow. Passerherbulus henslowi susurrans. On January 4, 1936 I identified a bird of this species on the ground by the east Main canal inside the refuge. I had an excellent view of it through 8-power glasses and was able to note the characteristic markings.

Eastern Vesper Sparrow. Pooecetes gramineus gramineus. Few records. One bird was observed October 25, and one on November 8, 1934.

Slate colored Junco. Junco hyemalis hyemalis. Fairly common winter resident.

Eastern Chipping Sparrow. Spizella passerina passerina. Scarce within the refuge. Noted on April 13 and May 28, 1935.

Eastern Field Sparrow. Spizella pusilla pusilla. Fairly commonly seen in winter; no summer records.

White-throated Sparrow. Zonotrichia albicollis. Common winter resident in thickets, hedges, along roads and canal banks.

Eastern Fox Sparrow. Passerella iliaca iliaca. Common winter resident in certain thickets and hedges along roadsides and canal banks.

Swamp Sparrow. Melospiza georgiana. Common winter resident; found in many places along the canal banks, in the marshes and about the New Holland Inn.

Eastern Song Sparrow. Melospiza melodia melodia. Common winter resident, associating with white-throats, fox and swamp sparrows. They are frequently in song, even on the coldest winter days.

Atlantic Song Sparrow. Melospiza melodia atlantica. On November 12, 1934, I had a song sparrow under observation that appeared to be like the description of this form. On other occasions also, other birds seen appeared to be grayer above, different from melodia. For this reason, I am including atlantica, tentatively, as occurring here.

Eastern Snow Bunting. Plectrophenax nivalis nivalis. On December 3, 1934, I had an excellent opportunity of approaching close to one of these rare stragglers from the north. It was on a bridge and by the road off the east main canal, and I was able to get within 30 feet of it. On January 7, 1935, near the same place a bird was seen running along the road by the canal in front of my automobile. This was probably the same individual. The species had been previously recorded at Beaufort (1931) and White Lake (1934) Pea Island (1901); Oriental (1918).

Although not actually recorded within the refuge boundaries, the laughing gull, (Larus atricilla) and Bonaparte's gull (Larus philadelphia) have been recorded at Englehard on the sound, a few miles from the refuge and they probably occur on the lake

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The Chat

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Nos. 9-10

TAKE A CHRISTMAS CENSUS

An annual census of birds has been taken at Christmas time for the past thirty-seven years. It has been sponsored by BIRD LORE, the magazine of the Audubon Association. From this census it is possible to learn much about the relative abundance and distribution of our birds. Last year there were but two such census from North Carolina reported in BIRD LORE: Chapel Hill and Red Springs. Every community should take one this year. The Chapel Hill census is used in this article as a guide.

The regulations are: (1) Take it as close to Christmas Day as possible, not before the 20th, nor later than the 26th. The census should cover at least six hours in the field, all day is better. (2) List the birds seen by species, giving the total seen of each species, also a grand total. The list must be in the order of the Fourth A. C. U. check-list (1931) which is the order used in most bird books printed since 1931. It begins with loons and ends with buntings (Peterson's FIELD GUIDE and Chapman's 1932 HANDBOOK have it, but not BIRDS OF AMERICA). This order is essential to get it printed in the magazine, it also helps in comparing lists. Do not give sub-specific names when only one such sub-species is likely to occur, as, the Screech Owl in the State is almost certain to be the Southern Screech Owl, therefore it is not necessary to prefix the Southern. This saves space, allowing more lists to be published. Give notes about anything unusual seen, as done in the list included. (3) Territory covered must not be more than a diameter of fifteen miles. The same territory covered each year gives a better basis of comparison. (4) Give time of starting and ending, weather conditions, number of observers, miles traveled with names and addresses of each participant.

Mail your census immediately. None printed that are received after December 31. Mail one copy to BIRD LORE, 1775 Broadway, New

York City. Mail another copy to THE CHAT. We will print any received in the January number. If you have any doubt about your list being correct, mail to THE CHAT, stating your difficulty, and we will send it in.

Example of 1936 Census: "Chapel Hill, N. C., December 26; dawn until dark, two hours out in the middle of the day. Clear, calm, temperature 35 to 65 degrees. Same territory covered as during censuses of last four years (6 mile radius including University Lake, Strowd's low grounds, Hogan's pond, New Hope Swamp, University campus and intermediate points). Observers separate for most part in morning and on foot, together in afternoon in car. Pied-billed Grebe, 1; Double-crested Cormorant, 1; Great Blue Heron, 2; Bittern, 1; Mallard, 12; Black Duck, 3; Lesser (?) Scaup, 6; Hooded Merganser, 1; Turkey Vulture, 10; Black Vulture, 7; Cooper's Hawk, 1; Red-tailed Hawk, 1; Red-shouldered Hawk, 5; Sparrow Hawk, 1; Bob-white, 12; Killdeer, 5; Woodcock, 1; Wilson's Snipe, 6; Mourning Dove, 13; Barred Owl, 1 (heard); Kingfisher, 2; Yellow-bellied Sapsucker, 8; Hairy Woodpecker, 10; Downy Woodpecker, 12; Phoebe, 1; Horned Lark, 25; Bluejay, 60; Crow, 61; Carolina Chickadee, 30; Tufted Titmouse, 23; White-breasted Nuthatch, 7; Red-breasted Nuthatch, 7; Brown-headed Nuthatch, 2; Brown Creeper, 4; Winter Wren, 33; Carolina Wren, 25; Mockingbird, 2; Brown Thrasher, 2; Robin, 150; Hermit Thrush, 63; Bluebird, 97; Golden-crowned Kinglet, 23; Ruby-crowned Kinglet, 12; Pippit, 17; Cedar Waxwing, 70; Starling, 9; Myrtle Warbler, 65; Pine Warbler, 3; English Sparrow, 8; Meadow Lark, 28; Red-wing, 600; Rusty Blackbird, 10; Purple Grackle, 5; Cowbird, 5; Cardinal, 36; Purple Finch, 84; Pine Siskin, 42; Goldfinch, 40; Towhee, 28; Savannah Sparrow, 17; Vesper Sparrow, 3; Junco, 850; Field Sparrow, 112; White-throated Sparrow, 750; Fox Sparrow, 52; Swamp Sparrow, 160; Song Sparrow, 900. Total 71 species, about 4833 individuals. Larger numbers are partly estimated. Occurrence of the Cormorant (E. O.) here is unusual, this being our first winter record; one was also observed on the lake in November of this year. The invasion of Siskins, Horned Larks and Red-breasted Nuthatches seems to be general here so far this winter. Turkey tracks were noted. Eugene Odum, Arnold Breckenridge, Edmund Taylor, Coit Coker, M. S. Breckenridge." (BIRD LORE, XXXIX, Pg.)

NEW HERON ROOKERIES

George B. Lay,
Biological Survey, Raleigh, N. C.

In August of this year, I visited a newly discovered Heron Rookery at Quitsna in Bertie County, N. C. The rookery is scattered over approximately four acres. The land is swampy without trees in the center. Much of the area is covered by low brushy growth beyond which there are taller and heavier trees. The herons had started nesting wherever there was brush, and even in some of the smaller trees.

This heronry is inhabited only by Little Blue Herons. Its discovery is significant in that it is farther north than Little Blues have been known to breed in North Carolina. The nearest point, formerly known to be used by the species as a breeding ground, is an island in

Lake Mattamuskeet. This fact did not appear in Earle Green's article on the Birds of Lake Mattamuskeet, but was told me by Dr. T. Gilbert Pearson. The only point farther north where Little Blues are known to nest is near Norfolk, Virginia, reported by J. J. Murray in THE RAVEN in 1933. Another rookery was reported to me farther down the Roanoke River. The discovery of these rookeries supports the conclusion that this species is rapidly pushing its breeding range northward, probably due to the fact that they have enjoyed better protection in recent years.

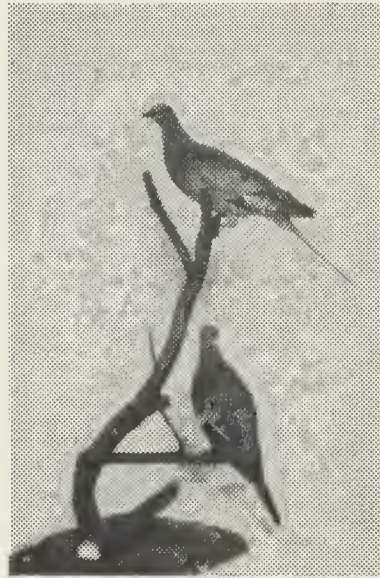
The heronry at Quitsna is about nine miles southwest of Windsor and within a few miles of the Roanoke River. It is fairly easily reached, being a few hundred yards off a good dirt road. The surest way to reach it is to phone from Windsor to Mr. E. Duke Spruill who will be glad to take those interested to see the colony,

We estimated that there were probably 10,000 herons in the rookery, counting adults and young. The young birds were all able to leave during the day and came streaking back about six o'clock in the evening. One local resident said the birds had been there about three years. He recalled that at first there were a dozen pairs or so, and that they were noted in large numbers for the first time this year. Comments about the colony were run in a Bertie County newspaper.

FLAMINGOES IN NORTH CAROLINA

S. N. Walker, Director of the Pea Island Migratory Waterfowl Refuge, reports two American Flamingoes (Phoenicopterus ruber) observed on Pea Island, June 23, 1937. Pea Island is a part of the N. C. banks just south of Oregon Inlet. He was riding up the beach, toward the inlet, in his car when he saw two strange birds ahead of him. Realizing that it was something that he had never seen before, he stopped the car and watched them through 7-power binoculars. After identifying them as Flamingoes, he drove closer and observed them again. He was able to drive his car within fifty yards of the birds several times, as the birds flew ahead of him along the beach. After watching them for more than half an hour he drove on to the ferry. Not having a gun with him he did not secure one as a specimen, although he realized that a sight record of such a bird would be questioned. The Biological Survey did not accept this as a record (note from W. F. Kubicke to the Editor.) The Rev. F. H. Craighill of Rocky Mount and the Editor talked with Mr. Walker, and spent a day with him on a trip along the banks. They found him to be a good naturalist: careful in his observations and cautious about identifying birds of which he was not sure,

Flamingoes are birds of the tropical coasts from Cuba to South America. Formerly they were regular visitors to extreme southern Florida and the Keys. At present they are rare enough in Florida to cause considerable comment when seen. Howell, in Florida Bird Life (pp. 122-24) lists them as observed five times between 1920 and 1931, a total of thirty-six individuals seen. Howell also lists the species as "accidental in South Carolina."



PASSENGER PIGEONS

By

H. H. BRIMLEY

IN 1813, Audubon witnessed a flight of these birds near Louisville that he estimated to contain more than a billion birds—and the last Passenger Pigeon died in the Cincinnati Zoo in 1914!

When the great roosts of these birds covered almost unbelievable areas—one nesting site recorded as occupying 250 square miles—the percentage of damage inflicted on the nesting pigeons by predatory birds and animals must have been infinitesimal, but as man killed them by millions, the nesting sites necessarily became smaller, with the predators taking a greater percentage of toll. This percentage of natural destruction continued to increase to the point where the destruction was much greater than the natural increase (each pair of birds producing not more than one young at a time) that the final wild Passenger Pigeon passed away.

Man paved the way for the predator, however, killing the birds for home consumption, for market and, probably in many cases, just for the pleasure of killing. Car loads and train loads of the birds were shipped to the large centers of population for food, while millions were netted and shipped alive for use as targets by the pigeon-shooting clubs. Untold numbers of wounded birds must also have perished as there was practically no education in the line of conservation of natural resources in those days and it is pretty certain that but little effort was made to secure the cripples when it was so much simpler to shoot another unwounded bird.

Here are a few recorded notes on large flocks of the Passenger Pigeon: A flight near Fort Mississauga, Canada, which filled the air and obscured the sun for 14 hours.

A note from Florida (1766) asserted that the pigeons were in such numbers for three months in the year that any account of them would seem incredible. The early settlers in Virginia found the pigeons in winter "beyond number or imagination!" The destruction of timber by the pigeons in the great roosts was a common occurrence.

In 1805 it was estimated that twenty million pigeons nested in the valleys along the Allegheny River. The last great nesting site in New York State in 1868 was almost 14 miles in length. A nesting site in Pennsylvania in 1870 was from 1½ to 2 miles wide and 40 miles in length. A flock in Kentucky (about 1806) was estimated to contain more than two billion birds, taking no account of the several strata of birds above the lowest. Most of the above notes regarding the vast multitudes of this bird that formerly swept over many parts of the eastern states are taken from Forbush's *Birds of Massachusetts*, and only a very small percentage of the data there given is quoted.

In North Carolina, the species did not nest, but it did occur in unbelievably vast flocks in the fall, winter and spring. The last flock of any size of which we have record is one of about a mile in width observed by the late Dr. K. P. Battle near Bingham School, Alamance County, between 1871 and 1872. Dr. Battle also killed one out of three seen at Chapel Hill in 1878. The writer of this has seen three in all since 1880, the last one two miles east of Raleigh in 1891.

The pair in the Museum was secured on an exchange basis through the courtesy of Dr. Thomas Barbour, Director of the Museum of Comparative Zoology, Harvard College. The male specimen was taken in New York State in 1877, and the female in Minnesota in 1890.

PRAIRIE HORNED LARK BREEDING AT BLOWING ROCK

Dr. J. J. Murray, Lexington, Va.

The first breeding record of the Prairie Horned Lark for North Carolina was reported in the CHAT for April and May-June. This was reported by Nelson Hairston from Lexington, N. C., on April 13, 1937. While spending some time at Blowing Rock this summer I visited Thunder Hill several times. On August 17, I saw a flock of eight of these Larks. At least one was an adult; some were dull, immature birds. I had seen a pair flying over this region a year ago, August 13, 1936. This seems to be one of the farthest south breeding records for this species.

HENDERSON BECOMES A BIRD SANCTUARY

Claudia Watkins Hunter

On November 5, 1937, Henderson officially became a bird sanctuary through the efforts of the Henderson Bird Club. The only other town in the South which is a sanctuary is Milledgeville, Georgia. The mayor of Henderson, Mr. Henry T. Powell, and several of the City Council were present at a public meeting held by the Club in the High School Auditorium on the above date and by official proclamation declared the city of Henderson a bird sanctuary.

The Henderson Bird Club was formed last spring, when some members of the North Carolina Bird Club met with bird lovers of the town and assisted them in organizing. From its inception, the prime objective of the club was the declaration of the sanctuary and to this end, club members enlisted the aid of the City Council and all civic organizations.

Already the Bird Club has erected signs at the highway entrances to Henderson announcing that it is a bird sanctuary. The Garden Club has begun the planting of the parkways at the north entrance to the city and the West End Garden Club is considering planting the other two entrances. Many of these plantings will be berry bearing shrubs that will furnish natural food for the birds.

The sanctuary will serve two purposes. First, as a matter of conservation it will tend to increase the number of song birds which come to the city. This will be done by furnishing more nesting places, a larger amount of cover and more food. This should increase the number of summer residents and also winter visitors. Second, it will serve to educate people as to the pleasure which birds give and their economic value to the city.

MORE ABOUT PURPLE MARTINS

Joe Biggs writes of the Martins around Washington. The flocks of Martins which he saw this fall were not quite as large as the flocks seen in 1936. "The martins which nest rather commonly in many local boxes, gather in immense flocks about the middle of July. I suppose the nesting is over by the end of the month. At any rate, we witnessed hundreds, perhaps thousands, of birds here in August 1936. These flocks appeared to gather largely in the cypress trees bordering the river in the eastern part of our city. Their numbers were augmented by others until about the middle of August, when they reached their greatest abundance. From that period until mid-September they decreased, some passing on south and others apparently still arriving. However, there were still a few to be seen by the middle of September. This year I was able to determine, as near as possible, the latest date, September 17, 1937. My observations for this fall are interesting since they seem to confirm observations given in THE CHAT. Indeed, I noticed very few birds that did not have the dirty white underparts of the female, and though I was not particularly struck by it, I do recall that very few adult males were seen."

Francis H. Craighill, writing of the martins around Rocky Mount, says: "There is nothing here to justify Mayor Flora's plaint about the scarcity of Martins, and they were very plentiful in June on the coastal stretches down below him. They start coming to town in May, and always gather on the electric light wires at the side of T. T. Thorne's house down near the city lake, flying back and forth to skim the surface for a drink of water. The birds that come, up to July, are almost all light breasted, and I figure that they are young birds of the first hatch, and that the parents linger for a second nesting. During July the big bunches move in and seek roosting places. Some years they have stayed together, but this year they divided into several groups. When they choose trees near a house, as they did here, they are quite a serious nuisance, and it is hard to keep people from shooting them. Boys and owls are also hard on them. Doing the best I could to protect them, hundreds were killed during the month they spent here. But thousands survive, and many come back the next year."

AMATEUR ADDS NEW SUB-SPECIES TO N. C. CHECKLIST

On September 9, G. M. Garren picked up a dead bird on the streets of Raleigh. It was like nothing he had seen and he took it to C. S. Brimley and Roxie Collie. The bird looked like a Bicknell's Thrush, the smaller and more southern variety of the Gray-checked Thrush. The skin was saved for the Museum collection. On November 20, H. C. Oberholser of the Biological Survey, Washington, visited the Museum and identified the specimen as a Willow Thrush (Hylocichla fuscescens salicicola Ridgway, A. O. U. No. 756a.) Dr. Oberholser is the authority in identifying specimens and among other organizations is a member of the N. C. B. C. The Willow Thrush is the western form of the Veery,

breeding west of the Mississippi River mainly in the Rocky Mountains and in migration straggles to the eastern U. S. It has been recorded from South Carolina. This specimen is the first record for North Carolina and brings our total number of sub-species to forty-one.

FIELD NOTES

WASHINGTON: Last dates for Purple Martins, September 17; Chimney Swift, October 10; Common Tern, October 10 (numerous in August and September); American Egret, September 27. The Tree Swallow appears to be absent here during the fall. Barn Swallows were seen two or three times during midsummer, regular migration appeared to begin about August 13. The Pileated Woodpecker seems to be holding its own in Chocowinity Swamp near Washington, where it may be seen on any favorable occasion. Least Terns were seen in July.

-----Joseph D. Biggs, Jr.

HENDERSON: Miss Grace Brown brought to the N. C. Museum on September 30 a Virginia Rail which she had picked up dead in front of her house. This bird is a transient and has been recorded at Raleigh as late as October 9.

-----Roxie Collie

PEA ISLAND: On August 2, 1937, Mrs. Lay and I had the privilege of driving down the beach, or wash, with S. N. Walker, who is director of the Pea Island Refuge. Least Sandpipers (plentiful); Semi-palmated Sandpipers (plentiful); Wilson's Plover, Semi-Palmated Plover, Black-bellied Plover and Pectoral Sandpiper (all common); Hudsonian Curlew (several flocks of 10 - 25); three Canada Geese have summered on the Refuge. Black Duck breed here and are common. Wood Duck breed in sloughs on land side of Sound and are not seen on the Refuge. Immature Black-crowned Night Heron plentiful in marsh areas.

-----George Lay

ROANOKE ISLAND: August 1, Rough Winged Swallows, Swifts, Purple Martins, Kingbirds, Brown Thrasher, Common Terns, Royal Terns. No English Sparrows.

-----George Lay

ROCKY MOUNT: Although Rocky Mount is more than 100 miles inland, it is occasionally visited by sea birds. The Forsters' Tern, August 27, was mentioned in the July-August issue of THE CHAT. A Common Tern was seen August 30. A Royal Tern, September 16; Bonaparte Gull (immature) October 20 and (Adult) October 25; Ring-billed Gull (adult) October 23.

First summer observation of the Song Sparrow, July 23, a single bird; a pair September 17. This was almost a month before the first migrant flock was observed October 11. Catbird nest was seen at the Country Club August 23, with three-fourths grown. It was the third

nest this year for the same pair. An albino crow was seen on the golf course October 26. A flock of more than 20 Blue Grosbeaks seen September 10 feeding on sorghum seed. About 5,000 Purple Martins and 2,000 Chimney Swifts gather in Rocky Mount each fall for the southward migration and roost together for a month or more before the start. This year the big flock of Martins left August 13, and the Swifts October 13. They vary but little from these dates.

Last observations of summer residents and visitors: Wood Thrush, August 5; Orchard Oriole, August 9; Crested Flycatcher, August 20; Prothonotary Warbler and Yellow-crowned Night Heron, August 30; Purple Martin, September 3; Yellow-throated Warbler, September 6; Spotted Sandpiper and Bluegrey Gnatcatcher, September 8; Red-eyed Vireo and Yellow-throated Vireo, September 9; White-eyed Vireo, Prairie Warbler and Hummingbird, September 11; Kingbird and Blue Grosbeak, September 16; Nighthawk, September 18; American Egret, September 19; Summer Tanager, Yellow-billed Cuckoo and Black and White Warbler, September 20; Black-crowned Night Heron, October 4; Redstart and Parula Warbler, October 6; Indigo Bunting, October 11; Swift, October 13; Green Heron and Catbird, October 16; Maryland Yellow-throat, October 18; Yellow Palm Warbler, October 19; Black-throated Blue Warbler, October 20; Black-poll Warbler and Wood Pewee, October 22; Blue-headed Vireo, October 25; Snowy Egret, November 15.

First observations of winter visitors and transients: Barn Swallow, August 7, Solitary Sandpiper, August 13; Cowbird, August 23; Tree Swallow, August 27; Western Sandpiper, August 20; Pectoral Sandpiper September 22; Wilson's Snipe, September 6; Osprey, September 8; Marsh Hawk, September 20; House Wren and Pigeon Hawk, September 24; Yellow-bellied Sapsucker, October 7; Myrtle Warbler, October 11; Pintail (first migrant duck) and Ruby-crowned Kinglet, October 13; White-throated Sparrow, October 15; Swamp Sparrow, Duck Hawk and Savannah Sparrow, October 16; Brown Creeper, October 20; American Coot, Purple Finch and Winter Wren (plentiful this year, did not recort it last year), October 25; Golden-crowned Kinglet and Hermit Thrush, October 26; Shoveller and Junco, October 29; Cedar Waxwing, October 30; American Pippit, November 3; Rusty Blackbird, November 9; Lesser Scaup Duck and Hooded Merganser, November 11; Green-winged Teal, November 14; Ring-necked Duck and American Merganser, November 16; Buffle Head, November 21; Great Horned Owl, November 23; Fox Sparrow, November 29; Red-breasted Nuthatch (not recorded last year), November 30.

-----Francis H. Craighill

PINEBLUFF: A mousetrap, set with cheese, was left a few moments on the steps of our house, November 15, and when picked up again a Carolina Wren was caught in it. The trap was of the round variety with holes bored in the upright sides. The bird had inserted its head in one of the holes. As Carolina Wrens are naturally of an inquiring disposition, we suppose this bird was investigating the mystery of the hole, rather than trying to get at the bait.

Mr. Richard Britton, of Great Kills, S. I., N. Y., who has been shooting quail in South Carolina every season for thirty years, reports that on November 16 he saw a quail sitting on her nest at the edge of a cornfield in Mt. Crogan, Chesterfield County, S. C. He returned to the site on November 23, disturbed the bird from the nest, and counted twelve eggs.

-----Marion C. MacNeille

SWANNANOVA: Pigeon Hawk, pair seen flying low, August 27.

-----George Lay

RALEIGH: Last Dates of Summer Visitors: Blue Grosbeak, September 4; Bluegrey Gnatcatcher, September 7; Rubythroated Hummingbird, September 17; Yellowthroated Warbler, September 19; Maryland Yellowthroat, September 26; Wood Pewee, September 27; Nighthawk, October 2; Redstart, October 6; Blueheaded Vireo, October 16; Chimney Swift (Grey and Bostian), October 22 (latest date in 53 years of observation).

First dates of winter visitors: Piedbilled Grebe, September 12; Whitethroated Sparrow, October 8; Brown Creeper, Rubycrowned Kinglet, October 9; Yellowbellied Sapsucker, October 12; Towhee, Mallard, October 16; Song Sparrow, October 17; Black Duck, Ringnecked Duck, Lesser Scaup, Ruddy Duck, Coot, October 26; Slatecolored Junco, October 31; Hermit Thrush, Goldeneye Duck, Shoveller, Redbreasted Merganser, November 18; Hooded Merganser, Bufflehead (Nine species of ducks seen on this date at Lake Johnson, by Grey and Brimley), November 22.

Transients and miscellaneous: Whiterumped Sandpiper (C. S. B.), July 23; Pectoral Sandpiper, September 12 (Two seen on Pullen Park Pond by Grey and Brimley, Grey saw another at the same place on October 21); Semipalmated Sandpiper, September 12 (one seen same place as preceding); Blackpoll Warbler (two seen), October 16 (Mrs. L. M. Dye); Osprey, November 7 (C. S. B., latest recorded date); Laughing Gull on Lake Johnson, November 22.

The above from observations by J. H. Grey, Jr., C. S. Brimley, G. B. Lay, C. H. Bostian, Miss Roxie Collie, and others.

LAKE JAMES: Duck Hawk, August 27.

-----George Lay

BLOWING ROCK: It has been my good fortune for the past twelve years to spend about a month in late summer at Blowing Rock, N. C. These visits have covered the period from late July to early September, and although it is not a good season for bird work a considerable amount of data has been gathered. A total list of 118 species and subspecies has been made. A few notes on uncommon birds seen and on some specimens of common birds collected for sub-specific identification during the past season may be of interest. I was at Blowing Rock in 1937 on July 2 and from July 29 to August 18.

Pied-billed Grebe: One at Cone's Lake on July 30. I was told that it had been there for several weeks. I have seen this species on three other years in August, but have found no evidence of breeding.

Little Blue Heron: One at Cone's Lake on July 2. I have a few other records, all but one in the white phase.

Barred Owl: One heard on August 5 on Green Hill in the morning. First record. Another seen on Flat Top later in August by Mr. and Mrs. Ellison Smyth.

Red-breasted Nuthatch: A few were seen regularly about our cottage yard on July 2 and from July 29 to August 18. The altitude here is about 3,900 feet. I have never seen them previously anywhere near so low as in the Blowing Rock section.

Golden-winged Warbler: An adult male at close range on August 14. I have seen it there only once before.

Kentucky Warbler: A male on August 9. Seen only once before.

I may add that a pair of Cardinals came regularly to a feeding station in the yard of our cottage in 1936 from July 28 to August 26. We have only two previous records.

A few common birds which were collected during the first half of August were identified by Dr. Alexander Wetmore. An adult female Flicker was identified as Colaptes a. luteus, as was to be expected. Three molting immature Blue Japs were Cyanocitta c. cristata. Three adult male Song Sparrows were identified as Melospiza melodia euphonia, the race recently described by Dr. Wetmore. Dr. Wetmore writes that these specimens are probably from near the southern limit of this race. Two of these skins are now in the U. S. National Museum. One of these was collected on the southern side of the mountain in the Atlantic drainage system. Dr. Wetmore and I had already collected specimens of this race in North Carolina, near Sturgills, Jefferson and Warrensville. I had hoped to learn the sub-species to which the Blowing Rock Robins belong, but the only specimen obtained was an immature and it was not possible to determine the race positively. Two molting immature Carolina Juncos were also collected for deposit in the National Museum.

-----J. J. Murray
Lexington, Virginia